Draft for consultation

Prepared by the National Forest Development Team

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Page

Preface 3

Executive summary 4

Foreword 6

Section I: The place 8

1. Character, influences and qualities 8
2. Landscape character 15

Section II: The strategy 22

The National Forest Vision 22
3: Forestry 26
4. Sport, recreation and tourism 35
5. Agriculture and rural enterprise 46
6. Nature conservation and historic heritage 52
7. Built development 59
8. Minerals and derelict land 62
9. Forest strategy zones 66

Section III: Implementation 71

10. Implementation, monitoring and review 71

References 73

Appendices

1. Landscape types: Forest design guidance 74
2. Forest trails: key linkages 77
3. A Forest visitor centre: possible themes 78
4. Native trees and shrubs and preferred site conditions 79
5. Red data birds and their habitat requirements 80
6. Development activity 81
7. Draft National Forest planning policy principles 83
8. Minerals and derelict land activity 87

Page

1. The National Forest boundary 8
2. Farming types 10
3. Land quality 11
4. Woodland, nature conservation and historic heritage 12
5. Recreation, leisure and water features 14
6. Regional landscape character areas and landscape types 16
7. Indicative forestry areas 24
8. Sport, recreation and tourism 38
9. Minerals and derelict land 62
10. The Forest vision 68

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Through this strategy, we seek your reaction to our proposal for the creation of the National Forest, as a great new resource for the nation.

We see the Forest as a symbol of hope. It would greatly enhance an area in the heart of the country in which 187,000 people live. It would redeem a landscape damaged by past and present mineral working and vulnerable to agricultural change. It would stimulate the economic regeneration of the region, and encourage recreation and tourism in the area. It would contribute to our supplies of home-grown timber, and offer new and productive uses of farmland. It would form a key element in this country's response to the Earth Summit in Rio.

This report sets out a bold concept for the National Forest, and a framework to guide its long-term creation. It is the culmination of 18 months of research, discussion and debate. I have pleasure in offering this draft strategy for public consultation; and commend people to read it and to challenge it and thereby contribute their own ideas.

The National Forest can only be achieved through partnerships with many organisations and with widespread public support. The future vision must be a shared one to which all can subscribe. Please help us shape that vision by sending written comments on this strategy to:

The National Forest Office, Stanleigh House, Chapel Street, Donisthorpe, Swadlincote, Derbyshire DE12 7PS by 31 December 1993.

John Johnson

SIR JOHN JOHNSON
Chairman

Introduction

The National Forest would create a vast new forested landscape covering nearly 502 square kilometres (200 square miles) of the Midlands. It would involve a major conversion of land use that would transform the area. This strategy sets out a vision for the Forest and demonstrates how it could be achieved. This vision is one of a true, working forest, within which would be a mosaic of farms, open land, towns and villages.

The strategy approach

The strategy examines the opportunities for the Forest's main land-using activities. It divides the Forest into six broad landscape zones. This allows the development of a strategic approach for each activity in each zone.

A rural regeneration approach is advocated. This recognises the economic interdependency between forestry, leisure and tourism, farming and agricultural diversification and the development of rural industry. Together these activities would result in a greatly improved environment and provide the trigger to economic regeneration.

Forestry

The strategy envisages woodland eventually covering about a third of the area, compared to six per cent now. Forestry would be woven into the physical and economic fabric of the area. It should integrate with, rather than mask, historic, ecological and cultural character (Chapter 1) and be designed to relate to the locale and setting of the Forest's different landscapes (Chapter 2).

The Forest concept provides the opportunity for an extensive range of planting options that would reflect the fact that it would be created by many different participants planting trees for many different reasons. Chapter 3 highlights these options. It also examines the environmental sensitivities to planting, which are relatively limited, and identifies types of planting that would be suited to certain areas.

Sport, recreation and tourism

The intention is that the Forest would be a major local and national resource for sport, recreation and tourism. It should offer a unique opportunity to develop a diverse range of activities and experiences. In Chapter 4 it is proposed that from the outset the Forest should be developed as a leisure Forest. There would be a mix of both formal, site-specific activities and more widespread informal pursuits.

An accessible forest is a key theme throughout, based upon a network of Forest trails. Trails could interlink sport, recreation and tourist attractions and radiate from main car parking and public transport points.

Tourism is likely to be based upon indigenous themes: historic (Ashby Castle); industrial (mining heritage); and special interest (beer at Burton); as well as the developing Forest itself. Management of visitors and traffic would be crucial.

Agriculture and rural enterprise

Chapter 5 describes the role of agriculture and rural enterprise. Substantial conversion of farmland to forestry is a pre-requisite but retaining a healthy agriculture will be the key to the strategy. Over one-third of the land would remain in farming and farmers would remain the main stewards of the land.

The Forest needs to be seen as being beneficial to farming, helping it to adjust to the new agricultural climate rather than taking over from it completely. Particular opportunities may be afforded through farm diversification related to leisure and farm tourism. Schemes such as Countryside Stewardship would encourage the management of valued landscapes, the creation of new open land and the provision and management of public access. There would also be opportunities to develop forest-related industries that both service the Forest and benefit from it.

Nature conservation and the historic heritage

Chapter 6 examines nature conservation and the historic heritage. Areas of particular interest for nature conservation cover about nine per cent of the Forest area. The strategy highlights the need to safeguard and encourage management of nature conservation sites and to maximise ecological interest through the design and sympathetic management of new woodlands and the creation of other habitats.

The area is rich in historical tradition and archaeological remains. Man's use of the land and its resources over time are writ large in its landscape, although scheduled archaeological sites are particularly concentrated in the Trent Valley and Midland Coalfield. Both the special and more workaday aspects of the historic heritage are important in their own right and as visitor attractions.

Built development and planning

Development would remain a matter for the local authorities through the statutory planning system. In Chapter 7 it is recognised that development would be part of the Forest dynamic. The strategy would be likely to result in new forest-related developments, which would further its objectives. In this respect it is crucial that development plans contain policies that are conducive to achieving the aim. At the same time, the plans should make clear that development is not acceptable merely because the proposer is willing to plant trees.

The strategy highlights that all forms of development could contribute in varying degrees and in different ways.

Minerals and derelict land

Chapter 8 examines mining and mineral working, which have been such a significant feature of large parts of the area and which are likely to remain a dominant land use. Currently around 2,000 hectares are in operational minerals use. More than 500 hectares of derelict land are the legacy of past activity. These sites offer tremendous potential for numerous uses including forestry, recreation and nature conservation.

Derelict land reclamation depends greatly on the cooperation of the major landowners and the vigorous application of the Derelict Land Grant programme. Early planting of derelict land sites is given a high priority.

The strategy also advocates early landscaping of proposed mineral workings to create wooded settings. In some instances it may not be possible to mitigate the scale of mineral operations on site, in which case off-site planting could be encouraged as a contribution to the Forest.

Forest strategy zones

Chapter 9 encapsulates the future vision of the Forest for each of the six geographic zones. The relative type, scale and weight of activities are described.

Implementation

Chapter 10 looks briefly at how the proposal could be implemented by identifying the roles of key players. Implementation will need to involve the public, private and voluntary sectors and local communities. Each will be encouraged to contribute in ways that best serve their diverse interests. In this way, the coherent whole that is envisaged by the strategy should be created.

Proposals on the mechanisms and future administration of the Forest are contained in the Forest Business Plan. This is being considered by Government.

The concept

The National Forest is one of the most ambitious and imaginative environmental projects of this century. It would encompass 502 square kilometres of the English Midlands with the intention of providing a very special, multi-purpose resource for the nation in the 21st century and beyond.

It was the Countryside Commission that pioneered the concept of a National Forest in 1987 when it advanced the case for multi-purpose forestry. With the backing of Government, the Commission appointed a Development Team in 1991 to draw up a strategy for the Forest and compile a business plan on the means that would be required to bring it into being.

What is being sought is no less than a transformation, involving a major conversion of land use at an exceptional rate. This, in an area that is one of the least wooded in the country, has a generally poor environmental outlook and bears the scars of years of mineral working. Economically the area has also been severely hit by the demise of the deep-mine coal industry. It has relatively high levels of unemployment and is trying to pull itself out of economic decline.

Local people and their representatives anticipate that the Forest could have an enormous impact, bringing wide-ranging environmental, social and economic benefits to the area. In particular it could be a major stimulus to environmental improvement and thereby economic regeneration. It has also captured the public imagination and could provide a tremendous boost to the morale of the area.

Forestry is the central element guiding this enormous land use change and eventually around a third of the area would be wooded. This would not be solid trees, however, as open land with glades and rides would be important elements within individual schemes.

A true, working forest is envisaged, rather than a wooded illusion of forest, which could be achieved with less planting. The idea is to create a linked pattern of wooded features with many different types of planting. These would range from large plantations and farm woodlands to replanted historic parklands and hedgerow trees.

At the same time the area's recreation and tourism potential would be realised, together with the development of farm diversification and rural enterprises and the enhancement of wildlife interest. Interwoven within the Forest would be a mosaic of farms, open land, towns and villages.

The reasons behind the broad planting target are fourfold.

- It provides sufficient weight for the area to be perceived as a forest. It should feel and look different from surrounding farmland landscapes when one is travelling into it.
- The level of planting should also distinguish it as being recognisably different from other, generally well-wooded landscapes, but without completely dominating the area with trees.
- Environmentally, the landscape and landform of the Forest could absorb this amount of planting without masking the character of the area and enabling full regard to be paid to environmental considerations.
- Economically the target is justified, as going beyond this figure, the costs per hectare of planting rise considerably [1].

Aim and objectives

The aim of the Forest proposal is to create and demonstrate a modern, truly multi-purpose forest that meets multiple environmental and economic objectives.

- To enhance and create a diverse landscape and wildlife habitat.
- To create a major recreation and tourism resource.
- To provide an alternative productive use for agricultural land in a manner that meets environmental objectives.
- To contribute to the national timber supply.
- To stimulate economic enterprise and create jobs.
- To contribute to wider environmental objectives such as a reduction in carbon dioxide in the atmosphere.

Philosophy of the Forest

The whole philosophy is to be imaginative in outlook and dynamic and enterprising in approach. It actively seeks to encourage activities and seize opportunities that fulfil the strategy objectives. Forest-related initiatives would be welcomed. Sizeable settlements have been included within the boundary as they are seen to be integral to the plan. In time they should develop as Forest towns, with themes of urban forestry complementing the rural forest around their fringes. This recognises the fact that the Forest is intended to be a thriving area in which many people will live, work and spend their leisure time.

So far the only factor that binds the Forest together is the boundary line on a map. Other than this it is an amalgam of geographic areas of very different character. In the future the Forest would be the essential element that gave unity and an identity to the whole area. The greatest challenge would be to achieve this in a way that does not mask local distinctiveness with trees, but integrates the new planting with the form of the land and retains the essential qualities that form the distinct character of areas within it.

The Forest strategy approach

This strategy proposes a future vision of the Forest and provides an indicative framework to guide its long-term creation. Its main emphasis is upon forest planting, where this planting could best be undertaken, the form it could take and the design considerations necessary to respect landscapes of differing character. It also identifies the timescales by which this might be achieved.

The strategy examines other major land using activities which, together with the planting itself, fulfil the overall vision. These include sport, recreation and tourism, agriculture and rural enterprise, nature conservation and the historic heritage, built development and minerals and derelict land. It describes how each relates to different parts of the area and recommends key themes throughout the Forest. Finally, the strategy looks at the key players who would be instrumental in bringing it about.

The strategy is based upon a wide range of research projects commissioned by the Development Team. These projects have assessed the historical geography of the Forest area; landscape character and its potential for enhancement; woodland character and forestry potential; the agricultural context and potential for diversification; the opportunities for sport, recreation and tourism; a rights of way survey; archaeological sensitivity; ecological interest and potential for habitat creation; and a survey of community attitudes. In addition, Technical Working Groups have undertaken work on statutory planning and nature conservation issues, and an Access Working Group has examined public access issues.

The strategy would be a non-statutory document to guide implementation of the Forest. It could be realised only with the help, support and participation of many differing partners and the landowners themselves, whose individual land use and management decisions would bring the Forest to fruition.

The report is presented in three sections. In Section I the present character and major influences that have shaped the Forest area are described. Section II sets out the future vision of the Forest. This examines each landuse by describing the opportunities and constraints, the strategy approach and what is required to bring it to fruition. Section III examines the roles of the agencies and organisations who could be involved in implementing the Forest.

Introduction

The Forest area is one of historical, ecological and cultural richness and contained within it is a wealth of variety and interest. This forms the essential building block for integrating forestry and related land uses in a way that would respect the character and value of what is already here and maximises potential for enhancement where it is most appropriate. It is important therefore to understand the character and qualities that form the National Forest area, as this gives pointers to how the Forest concept could be developed and realised.

Location

The area lies between the cities of Birmingham, Derby and Leicester and stretches across the counties of Staffordshire, Derbyshire and Leicestershire (see Map 1).

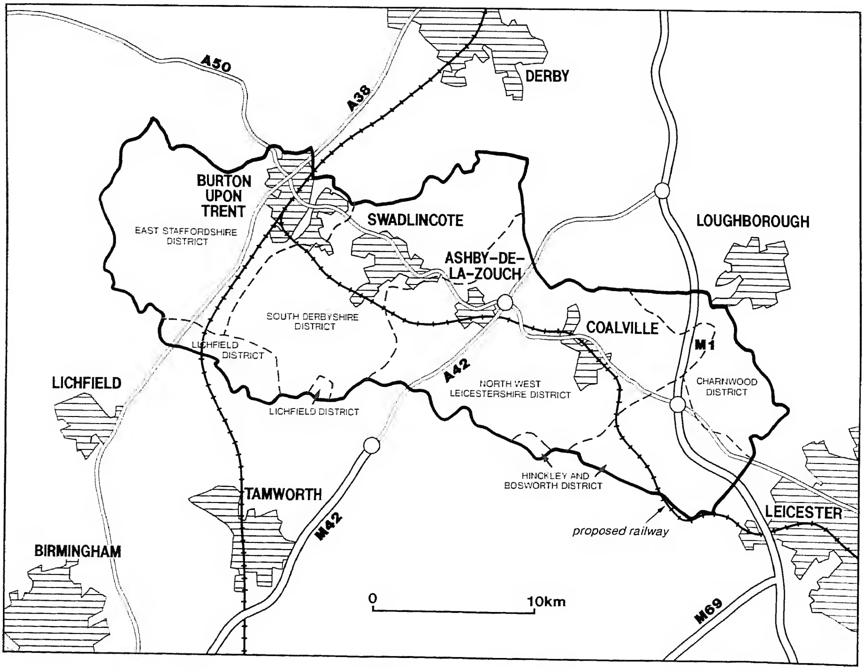
The proposed forest links the remnant ancient forests of Needwood and Charnwood and between them covers a substantial area of the Midland Coalfield. It includes the towns of Burton upon Trent, Swadlincote, Ashby de la Zouch and Coalville. It is accessible via the M1 and M42 motorways, the A38 and A50 trunk roads, and InterCity rail links to Burton upon Trent and Loughborough.

Physical influences

Geographically the area subtly changes from west to east, reflecting a diverse geology and its impact on the landform.

In the west the land rises gently from the River Trent to form the **Needwood Plateau**, which reaches 135 metres in height before dropping abruptly in a north facing escarpment. It lies on Mercia Mudstone and boulder clay and is dissected by several streams, giving the area a broken

Map 1. The National Forest boundary.



topography. A steep scarp marks a fall to the **Trent Basin**, defined by the wide alluvial floodplain of the River Trent. The valley basin is underlain by glacial sands and gravels and edged by flat river terraces a few metres above the floodplain.

Rising gradually eastwards are the rolling **Mease Lowlands**, which are finely cut by a series of brooks draining to the Rivers Trent and Mease. They lie on Mercia Mudstone and reach 100 metres in height along the edge of the **Coalfield Plateau**. Coal measures form the surface geology in most of this area but to the north and south they dip under Keuper Sandstone and to the east under Mercia Mudstone and boulder clay. Carboniferous limestone and millstone grit outcrop on the northern fringe where the landform is more undulating and above 150 metres in height.

Eastwards the land rises sharply to the **Charnwood Uplands**, which mark the highest part of the area at 278 metres. They are distinguished by outcropping pre-Cambrian rocks that break through the underlying Mercia Mudstone to give the area a unique rugged, hilly landform.

Historical influences

Human influences on the landscape are more visible than the subtle physical characteristics, and an understanding of the area's historical development helps to explain its appearance today.

Woodland

Extensive woodland cover was recorded throughout the area in the Domesday Survey, with Charnwood and Needwood divided between large manors. Between the 12th and 15th centuries many manorial deer parks were created, which probably helped conserve woodland cover. Most have left little impression on the landscape, although a good example survives at Bradgate Park. Parks continued to be enclosed from the 17th century onwards and it is these that are most prominent today.

Abundant woodland remained up to the 16th century. Hunberston described Needwood with ".... 7,869 acres of very forest-like ground, thinly set with oald oakes and timber trees" [2]. However, by 1800 woodland across the area had been considerably reduced. In Needwood most was disafforested after the Civil War to pay 17th century armies, while in Charnwood and the Coalfield woodland was felled to provide charcoal for the regions' many iron forges. Little further shrinkage occurred in the 19th century and maps show only slightly more woodland than is found today. Minor additions of game coverts resulted from the Enclosure Movement.

Agriculture

Historically the land from the Trent to Charnwood was dominated by open field agriculture. Most of Charnwood was an extensive area of common pasture and waste characterised by heathy vegetation. Heathland was also extensive along the southern edge of the coalfield. Elsewhere, common pasture was widespread in Needwood and along the Trent Valley and watercourses.

Small areas of early enclosure are found in Needwood, the Coalfield and Charnwood, although most of the modern agricultural landscape dates from Parliamentary Enclosure of the 18th and 19th centuries. This has resulted in a characteristic pattern of geometric fields.

Settlement and industry

The historic settlement pattern was closely related to agricultural development, with nucleated villages and scattered farmsteads. Imprinted upon this in the coalfield area is a strong industrial character caused by mining activity. Mining started on a small scale in the 13th century but expanded rapidly in the 18th and 19th centuries. Swadlincote and Coalville date largely from this period and other settlements grew at Measham, Ashby Woulds and Ibstock through clay and ironstone workings.

In contrast, the historic town of Ashby de la Zouch developed around its 12th century castle and became a centre for hosiery and cotton in the 19th century. Burton upon Trent is the main settlement to the west. It grew prosperously from the brewing industry from the 17th century onwards.

Current land use pattern

Settlement and industry

The total population of the Forest area is 187,000. The principal towns are Burton upon Trent (46,000), Coalville (30,250), Swadlincote (29,500) and Ashby de la Zouch (12,250); nine per cent of the area is built up. Small rural towns, such as Melbourne, and many villages are scattered throughout the area. Most have grown extensively from their historic cores. In the Coalfield small industrial settlements, such as Measham, and linear mining villages are a feature.

Distinct historic building styles can be recognised, ranging from red brick and timber in Needwood, the sandstone vernacular around Melbourne, brick terraced cottages in the Coalfield, to traditional granite stone and slate buildings in Charnwood.

Mineral workings are dominant in the Midland Coalfield, Trent Valley and Charnwood. Current workings total around 2,000 hectares. In the Coalfield open-cast mining accounts for almost half of this figure. Clay working is also important locally. In Charnwood hard rock quarrying is significant, and sand and gravel workings are a major feature in the Trent Valley.

Derelict land is primarily a feature of the Coalfield belt, and is associated with former mining activity. Around 500 hectares are officially designated as derelict throughout the Forest area but there are also numerous unofficial, smaller sites that are equally degraded in appearance.

Agriculture

Farming regime

MAFF statistics [3] show that the farming regime is very varied, with one part-time and eight full-time categories having been identified (see Map 2).

Number of farms (1988)

Specialist dairy	92	Cereals	27
Mainly dairy	50	General cropping	23
Livestock	44	Mixed	17
Pigs and poultry	18	Part-time	364
Horticulture	25	**Total**	**660**

Specialist dairy is the predominant farm type in many parishes but particularly in Needwood and the Midland Coalfield. Most farms are 30–100 hectares in size. Specialist dairy parishes have 15–65 per cent of land in arable crops, with those in Needwood and Charnwood having the lowest percentages. Mainly dairy farms tend to occur around the edges of the specialist dairy areas. The size of these farms is typically 50–200 hectares with a similar proportion of arable cropping (27–58 per cent).

Livestock holdings are scattered throughout the area and are often associated with parishes where dairying is important. Generally arable cropping in these parishes is insignificant. Pigs and poultry units are also only locally significant, with most in the 10–30 hectares size range.

Specialist cereals holdings are found mainly along the southern edge of the Forest area. Most are larger than 100 hectares and have 64–76 per cent in arable crops. Areas of general cropping and mixed farming tend to abut these areas, where 54–72 per cent of the land is cropped. Typical farm sizes are 50–200 hectares.

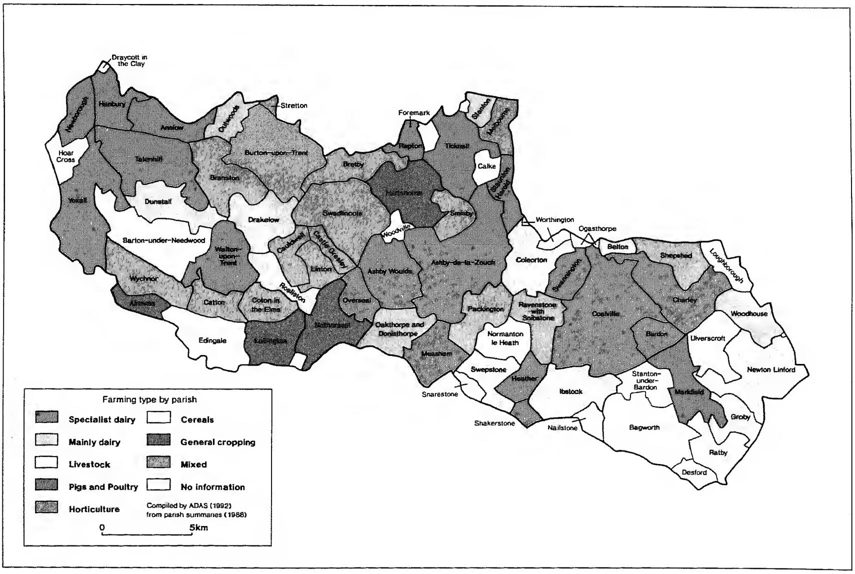
Areas of mixed farming, where no one farm type predominates, are clustered in the central Coalfield belt, in the small parishes north and south of Swadlincote and along the north Charnwood fringe.

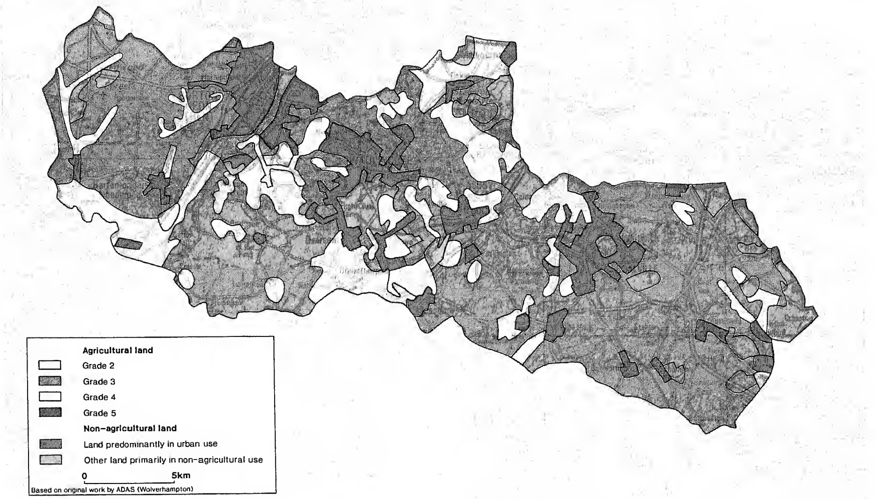
Horticultural units are locally concentrated around Burton upon Trent, Swadlincote and Melbourne, and most are less than five hectares. Part-time farms of less than 30 hectares are significant throughout the Forest and are particularly concentrated in Charnwood and in some Staffordshire parishes. Full-time farms account for 45 per cent of the total number of farms and cover 85 per cent of the Forest area.

Land quality

The majority of the area (54 per cent) is classified as Grade 3, with 10 per cent of both Grades 2 and 4 (see Map 3). Non-agricultural land such as woodland, golf courses and mineral extraction sites, and predominantly urban land uses including amenity land and allotments, account for 26 per cent of the land area. Grade 2 land is largely concentrated in the Mease Lowlands to the east of Walton on Trent and north of Netherseal, and near Melbourne in the north. Locally it occurs in the Midland Coalfield to the south west of Coalville and around Ashby de la Zouch and in isolated areas in the Trent Valley. It is largely

Map 2. Farming types.




Agricultural land
Grade 2
Grade 3
Grade 4
Grade 5
Non-agricultural land
Land predominantly in urban use
Other land primarily in non-agricultural use
0
5km
Based on original work by ADAS (Wolverhampton)

Map 3. Land quality.

associated with cereal holdings, general cropping or horticulture.

Grade 3 land, where the underlying soils are heavy-textured and poorly drained, tend to support dairy farming. More easily-worked and well-drained soils adjacent to Grade 2 land and on the edge of the Coalfield are usually put to cereals or mixed cropping.

Grade 4 land is mainly confined to grass production and fodder crops. It occurs extensively on the lowest parts of the floodplains and on the heavy, poorly drained soils of the coal measures. Some of the Charnwood rock outcrops are also classified as Grade 4. Grade 5 land occurs in less than one per cent of the area on the shallowest soils.

Land tenure

Of agricultural land, 59 per cent is owner–occupied, while 41 per cent is rented. This is higher than the national average of around 30 per cent of land rented.

The Mease Lowlands parishes have a particularly high concentration (above 90 per cent) of owner–occupied holdings, with the exception of Lullington and Castle Gresley parishes, which have 75–80 per cent rented land. Many of the parishes surrounding Ashby de la Zouch and fringing Charnwood have higher than average owner–occupied holdings (70–80 per cent). Elsewhere in these regions figures are typically between 35 and 50 per cent. Generally the traditional areas of large estates in Needwood, the Calke Uplands and north Charnwood show higher than average figures for tenanted land — around 60–65 per cent — with Ticknall in Calke as high as 85 per cent.

Woodland

There are 3,010 hectares of existing woodland covering six per cent of the Forest area (see Map 4) — a figure that is typical of English lowland counties [4]. It is mainly located in Needwood and Charnwood, although significant amounts also occur around Calke, Bretby and Staunton Harold. Woodland tends to have survived on the less well-drained and fertile soils and is mainly owned by large estates — 36 per cent is broadleaved, 9 per cent coniferous and 55 per cent mixed. Coniferous and mixed woods tend to be larger in size (more than 10 hectares) while 89 per cent of broadleaved woods are less than 10 hectares. Ancient woodlands account for 46 per cent of all woods and 19 per cent of these are classified as semi-natural sites. (Ancient woodlands are those that have had continuous wooded cover since at least 1600.)

Key woodland species include pedunculate oak on the Triassic marls and acidic soils of the coal measures and sessile oak on the thin pre-Cambrian soils in Charnwood. Ash is dominant on the boulder clay deposits and decreases in abundance eastwards. The most widely planted conifers are Corsican and Scots pine with some larch.

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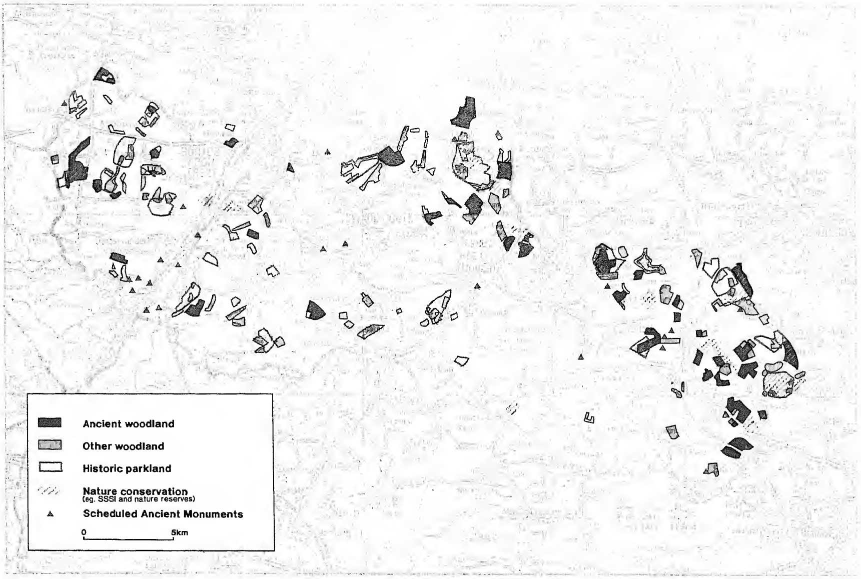
Nature conservation

The sites of greatest ecological interest are those that retain remnants of semi-natural vegetation and many industrial sites where secondary vegetation has recolonised. To date, around 4,700 hectares of land have been identified as having ecological importance*. Significantly, almost

*Existing surveys differ markedly. Leicestershire is well recorded, Derbyshire moderately so and Staffordshire significantly under recorded.



Map 4. Woodland, nature conservation and historic heritage.

half of this amount is concentrated in Charnwood. Of the total, 62 per cent is woodland, reflecting the paucity of other habitats that now survive. Overall the area includes 26 Sites of Special Scientific Interest (SSSIs), which cover around 1,800 hectares (see Map 4).

Woodland

Ancient woodlands are particularly concentrated in Charnwood, the Calke Uplands and Needwood. Of these, scattered blocks of semi-natural ancient woodland, such as Swithland Wood SSSI, are most important. Many other ancient woodlands have been substantially replanted and are reduced in their conservation value. However, their richer ground flora and fauna, built up over centuries, still make them superior wildlife sites to more recent plantations. Copses, game coverts and spinneys are also locally significant.

Parkland

Historic parklands with mature trees, water features and unimproved grasslands are important conservation features that occur throughout the area. They are often associated with ancient woodlands. The medieval deer park at Bradgate Park, an SSSI, is a fine example.

Heathland

Heathland, now rare and greatly diminished, is associated with the poorer soils in Charnwood and the Midland Coalfield. Semi-natural sites are significant in Charnwood, while secondary sites are a feature of former Coalfield mineral workings. Charnwood Lodge SSSI and Newfield Colliery are excellent examples. Elsewhere, fragments of heathy vegetation survive along some railway banks and roadsides.

Traditional grasslands

Acid grasslands are a feature of Charnwood and the Midland Coalfield, with remnant calcareous grasslands found in the Calke Uplands. Neutral grasslands characterise most river valleys. All types of grassland are in decline. The best remaining sites are found on steep hillsides and open summits; as isolated groups of hedged fields; along disused railway lines and roadside verges; and associated with derelict mineral workings.

Open water

Groby Pool SSSI is the largest natural water area. There are several reservoirs, Blackbrook and Cropston being SSSIs; the Ashby Canal, also an SSSI; and several lakes restored from former gravel workings. Locally significant are the many subsidence flashes in the Coalfield area and field ponds, which are scattered throughout the agricultural landscape.

River wetlands

River floodplains and streamside fields were historically managed as wet meadow land. The River Mease and many small streams remain relatively unspoilt, retaining a good variety of marginal vegetation, wet grassland, riverside trees and scrub. Although interest along the River Trent is fragmented it retains areas of meadow and marsh land, reedbeds and ox-bow lakes. The floodplain, together with large lakes restored from mineral working, are also nationally important for wintering wildfowl and wading birds.

Hedgerows

Species-rich hedgerows are particularly characteristic of the Midland Coalfield, where some enclosures date from the 16th century. Hedgerows are also significant in Needwood and Charnwood, where they are often marked by lines of hedgerow trees.

Mineral workings

Many of the above features are well represented on sites of former mineral workings and along disused railway lines. These sites make a major contribution to nature conservation and are exemplified by the SSSI at Dimminsdale — a mix of open water, marsh, damp woodland, scrub and heath — and the Ticknall Tramway, with its scrub, woodland and calcareous grassland.

Geological sites

The Forest area includes several geological SSSIs, plus a number of Regionally Important Geological Sites (RIGS). RIGS occur as both small sites and larger areas of geological interest. Geological sites are of particular importance for earth sciences and occur most commonly in Charnwood and the Calke Uplands.

Historic heritage

Knowledge of archaeological and historic sites is reasonably good in some areas but for large areas it is incomplete. The Royal Commission on Historic Monuments in England is currently undertaking an extensive map and aerial photography survey, which is due for completion towards the end of 1993. This resumé is based only upon known evidence, although indications are that new sites will be discovered.

Prehistoric sites

The greatest concentration of prehistoric sites occurs on the terrace gravels of the Trent Valley with henges, barrows and cropmark sites. This is the most outstanding part of the area for archaeology and is reflected in the largest number of scheduled ancient monuments. Other scheduled sites are significant in Charnwood.

Medieval sites

There are a number of early castles represented by motte earthworks and scheduled sites. Deserted village sites are a feature around the edges of Needwood and Charnwood. Ecclesiastical sites are also significant.

Historic landscapes

There are several types of historic landscape that are important, including ridge and furrow; commons and related mining settlement at Coleorton; medieval and 19th century field enclosures, especially in Needwood and Charnwood; ancient woodlands; and designed parklands of which Bradgate Park, Calke Abbey and Coleorton Hall are Grade II sites on the English Heritage register.

Industrial archaeology

Industrial sites are largely concentrated in the Midland Coalfield, with remnant ironworks, lime workings, blast furnaces, collieries and pottery works. Associated canals and tramways are also noteworthy features.

Recreation, leisure and tourism

Outdoor recreation

Facilities occur across the Forest area but with a high concentration in Charnwood (see Map 5). There are 23 designated public access areas, ranging from country parks at Beacon Hill and Bradgate Park to several woods managed by the Woodland Trust. In addition there are eight water areas with access and six sites that are nature reserves. A total of 24 walking routes and trails have been identified and general walks include parts of the Leicestershire Round and Ashby Canal paths. The public footpaths network is generally good, although the condition is varied. Bridleways are poorly provided for. Taken together this is a significant and varied resource but one that is fairly typical of comparable Midlands areas.

Sports provision

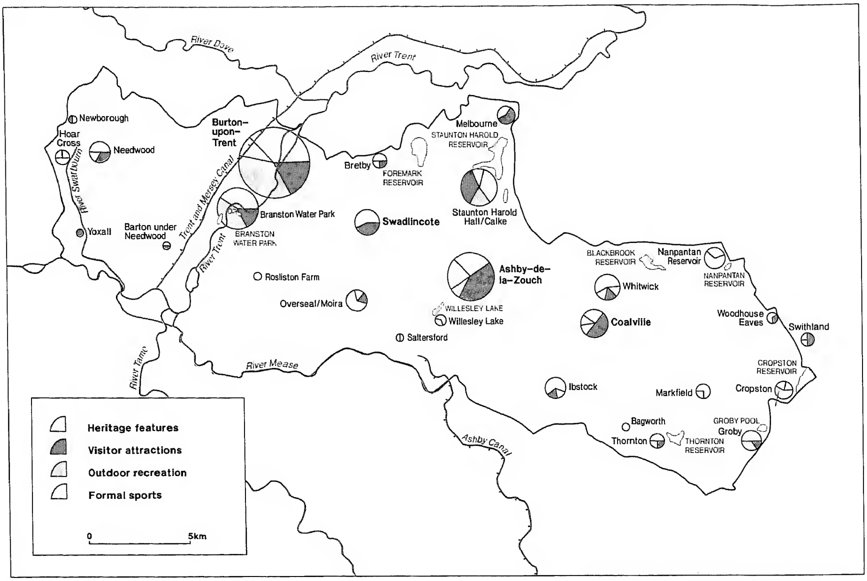
This is also strong and varied with more than 70 separate venues. The most frequently occurring facilities are as:

Angling	17
Golf	10
Sailing and windsurfing	5
Leisure centres with pools	5
Canoeing or rowing	5
Riding	4
Recreation centres	3
Motor sports	2
Clay pigeon shooting	2

Of particular note are the variety of water sports available on four reservoirs, the large number of golf courses, and isolated activities of regional significance such as Swadlincote dry ski centre and Garland's clay pigeon shooting ground, Edingale. In addition, shooting for game is a significant feature of the large estates in the area.

Tourist attractions

These include 12 historic properties, the most well known being Calke Abbey (106,000 visitors per annum); others include Ashby Castle, Donnington Manor House and Mount St Bernards Abbey (less than 15,000 visitors each). There are a further nine attractions associated with industry or industrial heritage. The Bass Museum, with 80,000 visitors, is the most significant. The industrial heritage museums at Moira and Swannington receive less than 8,000 visitors. Other major attractions include Bradgate and Beacon Hill Country Parks (estimated 1½ million



Map 5. Recreation, leisure and water features.

visitors), Broombriggs Open Farm (60,000 visitors) and the retail outlets at Byrkely Park Garden Centre and Staunton Harold Craft Centre, with 325,000 and 100,000 visitors respectively.

Water resources

The area includes six reservoirs (see Map 5). All have facilities for fishing and windsurfing. At Foremark and Staunton Harold there is a wide provision of facilities including sailing, horse-riding, nature trails, car parks and toilets.

Other water resources include the River Mease and Trent (in part) — both with fishing facilities — and canoeing and rowing are an attraction on the Trent; a section of the Trent and Mersey Canal — designated a Conservation Area; Branston Water Park, with its extensive recreation and nature conservation interest; plus other lakes reclaimed from mineral workings and many pools and flashes associated with coal mining and quarrying.

Land ownership

Patterns of known land ownership vary throughout the area. Both Needwood and the Calke Uplands are dominated by large estates. In Needwood these include the Duchy of Lancaster and the Rangemore, Dunstall and Anslow estates. Together these cover around 3,350 hectares. In the Calke Uplands the National Trust, Severn Trent Water and Harpur Crewe Estate all have substantial holdings and there are significant (400 hectares plus) private ownerships at Bretby and Staunton Harold.

In the Midland Coalfield and Trent Valley much land is controlled by mineral companies. In the Coalfield, British Coal have the biggest interest with around 3,000 hectares; smaller areas are owned by A F Budge, Hepworths and Ibstock Brick. The more rural farmland areas are typified by farm holdings of 60–80 hectares. Other significant holdings include a 600 hectare private ownership north of Measham and several small farm units owned by Leicestershire County Council.

In the Trent Valley the main mineral operators include ARC, Redland Aggregates and Butterley Brickworks who control more than 400 hectares. Other significant owners are the Rangemore Estate and East Staffordshire District Council.

In contrast, the Mease Lowlands are dominated by private landowners, with many farm holdings in the 20–100 hectares range. There are also two known large landholdings of more than 400 hectares on the southern edge.

Charnwood is distinctive in the amount of land that is owned by voluntary and public organisations. In combination the Bradgate Park and Woods Trusts, the Leicestershire and Rutland Conservation Trust, the Woodland Trust and the National Trust own more than 910 hectares. A further 344 hectares are owned by Leicestershire County Council and Charnwood Borough Council. Other significant ownerships include the De Lisle Estates (around 400 hectares), the Paget Estate and quarry companies such as ARC, Tarmac and Bardon Quarries, which together work more than 400 hectares.

Introduction

The character of the Forest area's varied landscapes has been identified and described through a landscape assessment [5]. This draws together physical, historical and ecological influences and aspects of current land use described in Chapter 1.

The large-scale landscape structure is defined by six 'regional character areas' (see Map 6), which have individual unity and local distinctiveness. These are often small parts of wider landscapes occurring beyond the Forest boundary.

Within these areas, six landscape types can be identified which to a greater or lesser extent are influenced by agricultural, urban or industrial activity. These often recur in different regional character areas but are distinguished by regional influences. The regional character areas and landscape types geographically describe and help in understanding the subtle differences in landscape that occur throughout the Forest.

Regional character areas

Needwood

This is an historic well-wooded landscape with many ancient woodlands, hedgerow trees, designed parklands and a pattern of hedged fields. It is an area of mixed farmland that retains a strong pastoral character. It has a distinct building style of vernacular timber-framed houses and red brick farmsteads. A network of wide straight roads (former rides in the Ancient Needwood Forest) and narrow twisting lanes link a scattered settlement pattern of villages and hamlets.

Trent Valley

The Trent Valley is marked by an extensive, flat floodplain formed by broad, slowly meandering rivers. It is dominated by industrial and urban influences, with widespread sand and gravel extraction, Drakelow power station and major road and rail routes. Ribbon development is a feature along the A38. There are many large, open-cropped fields, plus remnant pastures and water meadows. The valley is generally unwooded with, in places, a scrubby character of gappy, overgrown hedges and thickets of shrubs fringing pools reclaimed from gravel workings. It has a fragmented overall appearance.

Mease Lowlands

This is a rolling, well ordered agricultural landscape that is characterised by large cropped fields, intact hedgerow patterns, the influence of country estates and a scattering of game coverts. Tall church spires are an eye-catching feature, pinpointing several small villages. Settlement is linked by a network of rural lanes, often with wide grass verges.

Midland Coalfield

The Coalfield is dominated by former mining activity, which has imprinted a strong industrial character upon the landscape. Coal mining and clayworking have created a legacy of spoil heaps and derelict land, with sites around built-up areas and in the open countryside. The landscape is open and rolling, with agricultural land woven between the industrial and urban fabric. It is generally unwooded with many gappy, hedged fields. Settlement is typified by straggling towns and villages, and brick-built terraced miners' cottages are often a feature of skyline views.

Calke Uplands

This area has a strong rural character, with an undulating, upland feel offering plateau-top views across the Trent Valley. It includes large parklands and wooded country estates and there are large reservoirs at Foremark and Staunton Harold. Mixed farmland surrounds the parks, with a pattern of hedged fields and scattered hedgerow trees. The plateau-top is dominated by large arable fields and is sparsely wooded, with a fragmented hedgerow pattern. Brick and sandstone vernacular buildings are a feature of the villages.

Charnwood

Charnwood has a rugged, upland character, a varied hilly landform and many exposed crags and rocky knolls. Heathland characterises the open summits. The area has an historic well-wooded character, with many ancient woodlands, parklands and scattered hedgerow trees. Stone field walls are distinctive in the upland landscape, while on lower slopes there is a pattern of hedged fields. Vernacular stone buildings give the area a unified building style. Stone quarries occur in the area but are generally hidden by the well-wooded landscape.

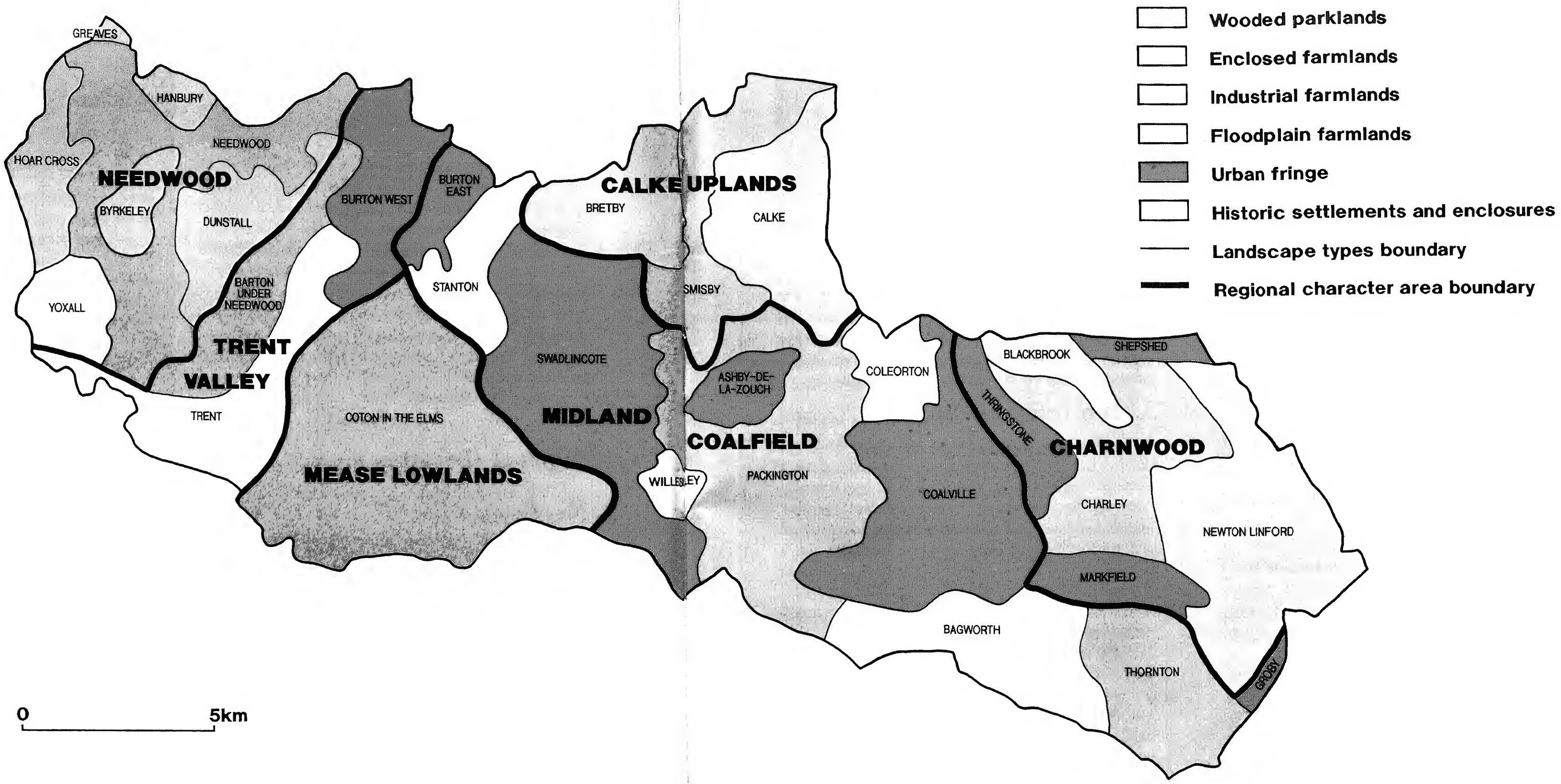
Landscape types

Enclosed farmlands

This is the most extensive landscape type and it occurs on areas of high, sloping plateau in Needwood, the Calke Uplands and Charnwood and in lower lying, flat-to-gently rolling land in the Trent Valley, Mease Lowlands and Midland Coalfield.

The landscape is predominantly open, sparsely wooded, mixed farmland, and defined for the most part by a pattern of hedged fields. This gives way in the Charley area

Map 6. *Regional character areas and landscape types.*

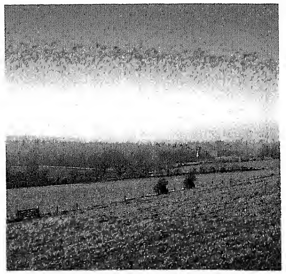


The historic wooded landscape of Needwood

The broad open valley of the River Trent

The rolling farmland of the Mease Lowlands

The industrial legacy of the Midland Coalfield


The undulating views of the Calke Uplands

The rugged wooded hills of Charnwood

Enclosed farmlands.

(Charnwood) to a distinctive grid-like pattern of stone field walls. On the high, open summits there are also rocky knolls surrounded by extensive areas of rough grassland, heathland, bracken and gorse.

Within these landscapes there are variations in the size of field pattern, the condition of field boundaries and the presence or absence of trees and woodlands. Areas of intensive cropping tend to be large in scale with an 'open' field pattern, occasional poorly-defined hedgerows and virtually no tree cover. Most widespread are areas of mixed farming with medium-to-large fields defined by generally low-cut, gappy hedgerows. These are sparsely wooded, with scattered hedgerow trees and some small woodlands. In other places pockets of permanent pasture are evident, particularly along watercourses and surrounding villages. These areas retain something of their traditional character, with a small-scale field pattern, tall thick hedgerows and numerous hedgerow trees.

Parts of these landscapes are quite well wooded. These tend to occur along stream corridors, where the rolling landform often draws attention to a tree-lined watercourse, associated with estates, where clusters of small woodlands are managed as game coverts, or associated with prominent features such as the Trent and Mersey Canal and Thornton Reservoir. Trees and scrub surrounding field ponds are also a feature.

These landscapes have a strong rural character and there are few urban intrusions. Settlement is characterised by scattered farmsteads and quiet villages. Wide, straight roads — planned with the field enclosures — are a feature linking settlements in Needwood and Charnwood.

Urban fringe landscapes

Large, often sprawling settlements, mineral workings and derelict land dominate these landscapes, giving them a disturbed and fragmented appearance. They are generally open, with few trees and areas of farmland often appearing sandwiched between a mix of housing, factories, mines and works. In the mining areas the landscape has a particularly run-down character that is typified by tracts of despoiled land, which often abut open farmland. In the farmed landscape there are many gappy, poorly managed hedgerows and trees showing signs of die-back.

Horse grazing, allotments and other non-agricultural activities add to the fragmented appearance. Major roads and railways are also prominent, making the areas busy with the noise and movement of traffic. Power lines are additional intrusive features on the skyline.

This is a very complex landscape type in which individual areas vary widely due to many different parcels of land being put to different land uses. The mosaic is made up of several distinct types of land.

Urban fringe landscape.

Industrial farmlands.

Derelict land

Appearing as both large tracts of former colliery workings with spoil heaps and redundant buildings, and as small pockets of despoiled land that is often fly-tipped and starting to scrub over.

Mineral workings

Occurring as large, generally well-enclosed granite quarries in Charnwood and more sprawling, poorly screened open-cast coal and clay workings in the Coalfield.

Reclaimed mining land

These are generally unattractive, large-scale open grassland landscapes with no field pattern and little or no tree cover.

Cropped farmland

This is widespread and characterised by medium-to-large fields with very poor field boundaries. Hedges are low cut and gappy and there are few trees.

Pasture land

Remnant pastures occur around settlements. Around rural settlements they are often well-managed with a strong hedgerow pattern, although few trees. Around mining settlements pastures appear unmanaged with many overgrown, gappy hedges.

Amenity land

Occurring as isolated, mostly unwooded pockets of land in and around urban areas.

Industrial farmlands

This landscape type occurs near to the main mining settlements and is transitionary between the urban fringe and enclosed farmlands landscape types. The main difference from the urban fringe is that farmland rather than developed land is the dominant factor. It differs from the enclosed farmlands landscapes in that industrial influences are prominent. This gives the landscape a rather bleak character marked by scattered mine sites, mining villages, spoil tips and associated works. In the Stanton area power lines and busy roads contribute to the degraded appearance.

Interspersed between this industrial activity are extensive tracts of open, gently rolling farmland, which are intensively cropped in a pattern of medium-to-large fields. The hedgerow pattern is in decline, with many hedges almost defunct and others low-cut and gappy. Hedgerow trees are the main wooded element but these are sparse and many are showing signs of die-back. Views are generally long, and mines, tips and the edges of towns and villages are visible from some distance.

Floodplain farmlands

The floodplain of the River Trent is different from other landscapes in that it is very flat and wide. It hardly registers as being part of an enclosed valley because the sloping sides are scarcely visible except from the floodplain's edge. The landscape is split into two sections. The major section between Alrewas and Burton is a large-scale, disturbed landscape; the second section west from Alrewas is relatively intact and unspoilt.

The overriding impression of the Alrewas/Burton section is its degraded and fragmented character, which results from widespread and large-scale gravel extraction, the impact of road and rail routes and significant urban development. The landscape appears very busy and noisy.

Areas of farmland are sandwiched between the transport routes and mineral workings and are mainly large, open arable fields with no hedges or trees. Overall this section is sparsely wooded, although small riverine woods are a feature in places. Groups of pools and lakes reclaimed from gravel workings are also a feature.

In contrast the floodplain west from Alrewas is relatively unspoilt. Here the valley is narrower and the rising ground above the floodplain more apparent. There is an intact pattern of medium sized pastures, water meadows and some arable fields. Hedgelines are strong in most places although sometimes gappy and overgrown. The area is also quite well wooded, with many small woods and thinly scattered hedgerow trees.

Floodplain farmlands.

Wooded parklands

These are attractive and distinctive landscapes of considerable interest and diversity. They are ancient landscapes characterised by varied, hilly topography, a strongly wooded appearance and remnants of semi-natural, 'heathy' vegetation. They include the wooded cores of the former Needwood and Charnwood forests and the historic parkland estates of the Calke Uplands.

The varied landform is formed by a mixture of open hills and steeply sloping stream valleys. Some of the stream valleys have been dammed to form reservoirs. The landform is most intricate in the Charnwood hills, where there are many rocky knolls and craggy granite outcrops. Also prominent is the steep scarp that separates Needwood from the Trent Valley.

Woodland is widespread and relates strongly to the landform. It occurs mainly in prominent positions on hill tops, steep slopes, valley sides and along stream corridors. There are many ancient woodlands and these are often associated with large wooded estates, which include many designed parklands with mature trees. Hedgerow trees are also numerous. The combination of these wooded elements with the varied relief creates the impression of being within quite enclosed, forested landscapes.

Farmland is a mixture of arable and pasture land with medium sized, hedged fields. Stone field walls are a feature in parts of Charnwood, particularly around the villages and enclosing woodlands. The field pattern is generally intact and registers as a strong feature when viewed on steep slopes. Most of the farmland consists of geometric field enclosures, although small areas of irregular, medieval field patterns remain in places. Around Newtown Linford (Charnwood), there are long, narrow fields that probably originated from enclosure of open fields in strips.

An important distinguishing feature is the regular occurrence of patches of semi-natural vegetation, particularly bracken, gorse and rough grassland, which are remnants of the former Forest waste. This adds diversity and interest to the landscape. It is often a feature of steep slopes, hilltops and roadside verges. Semi-natural vegetation is most widespread in Charnwood where there are extensive areas of heathland and acid grassland on the open summits.

The landscape also has a distinctive settlement pattern, with a mixture of scattered farmsteads, large country houses, hamlets and small villages. There are many vernacular buildings that contribute strongly to the local distinctiveness of these landscapes.

Wooded parklands.

Historic settlement and enclosures.

Historic settlement and enclosures

These are distinct, relatively unspoilt landscapes. They have an ancient, enclosed character and a dispersed settlement pattern. They are characterised by many small, irregularly shaped pastoral fields bounded by thick hedgerows; roadside hedgebanks are a feature in Yoxall. They are well-wooded landscapes with numerous hedgerow trees, small woodlands and well-wooded water courses. Other wooded features include mature parkland (Yoxall) and thick tree cover along a former mineral railway line (Coleorton).

An ancient, dispersed settlement pattern is distinctive in each area. In Coleorton this is derived from its history as an early coal mining area and is typified by many cottages scattered across former common land. It is an important historic landscape, with a number of medieval bell pits used for mining in the 15th century, and the Swannington tramway, which is one of the earliest to serve the mining industry. In Yoxall, settlement is scattered along a network of narrow lanes with the appearance of cottages that may have encroached on an area of former common land.

The National Forest is intended to transform the physical character of the area and the way it is perceived. It should bring not only radical landscape change but also land use conversion and the realisation of the area's recreational potential. The National Forest could become a vital and attractive place where people would want to live, work and spend their leisure time. The area, although ideally located, suffers from a poor environmental image. It is intended that the Forest strategy provides a positive force for regeneration, bringing new forms of economic activity, jobs and wealth.

The strategy recognises the economic interdependency between forestry, leisure and tourism, farming and agricultural diversification, and the development of rural industry. Together these can provide the means for future sustainability of the Forest.

The idea is not to mask the area in trees, but to weave forestry into the physical and economic fabric of the area and to integrate it within its historic, ecological and cultural character.

Around a third of the area would eventually be of wooded character, as against the six per cent now, with some areas being more suited to extensive planting than others. The type of forestry would vary widely according to the planters and their motives. The strategy provides guidance on the nature and location of planting, so that it would reflect the scale and character of the existing landscapes, without unduly inhibiting the planter.

The heart of the Forest in Moira.

Extensive planting would be targeted on areas of derelict land and former mineral workings, to provide wooded settings for recreation and leisure. Areas of open, rural farmland could provide opportunities for commercial plantations and farm woodlands, with short rotation coppice and agro-forestry also being a feature.

Around urban fringes amenity planting and development landscaping have a natural focus, and urban forestry would be a theme of all major built-up areas. In areas of historic landscape a more selective approach would subtly enhance existing character by small woodland planting and replanting parkland and hedgerow trees. Planting would also mark the main transport corridors that form natural gateways into and through the Forest.

Substantial conversion of farmland to forestry would be a pre-requisite, but retaining a healthy agriculture is equally important to achieving the vision, given that more than a third of the land is intended to remain in farming. The coming of the Forest must therefore be beneficial to farming and help it to adjust to the new agricultural climate rather than taking over from it completely. Participation in the Forest could offer unique opportunities to broaden the base of agricultural businesses through diversification into leisure, tourism and conservation initiatives.

Farmland would also provide an important open land element in the Forest, complementing new forestry planting and providing new access in many areas. From both a farm business viewpoint and a forest landscape perspective it would be important that farmland remained well managed. Economically and socially the retention of a farming community is crucial. The management and care of the future Forest would in many cases be in farmers' hands.

Opportunities would also be seized to ensure the survival and traditional management of more natural open land such as heathlands, meadowlands, historic parklands and wetlands. Such open land can provide an important visual contrast, complementing new planting and providing an element of naturalness alongside well-managed farmland.

Existing open land is minimal in extent and new areas would need to be created. Restoration of mineral workings and derelict land would offer particular opportunities and some areas of farmland may also be appropriate. Creating and managing open land would be targeted through schemes such as Countryside Stewardship and, in due course, the positive use of set-aside. It is expected that natural open land would cover around five per cent of the Forest area. This would be in addition to that designed as rides and glades through forest planting.

An accessible Forest is also be a key theme, with a network of trails running throughout the area. These would interlink sport, recreation and tourism locations and would radiate from main car parking and public transport points. Trails along derelict mineral railway lines could provide special links between urban areas and the Forest. The trails network would provide the main means for visitors to discover and explore quieter areas of the Forest.

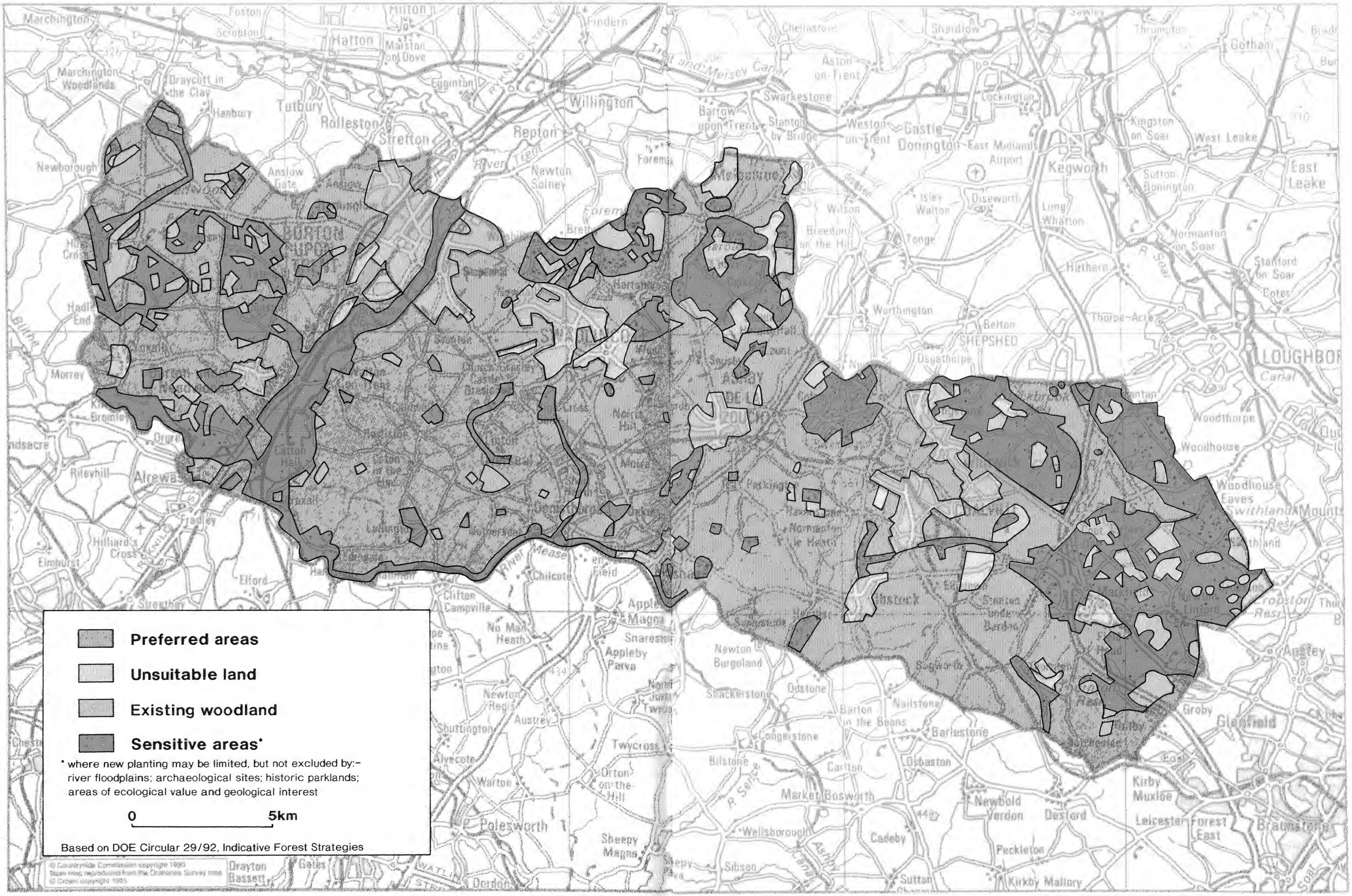
The Forest is intended to be a major local and national resource for leisure and recreation. Sites would be located principally on areas of derelict land and former mineral workings. It could accommodate a wide variety of formal, site-specific activities that might attract large numbers of people. Substantial areas would also be set aside in more rural countryside for informal pursuits and quiet enjoyment. Leisure and recreation sites could cover around five per cent of the Forest area.

Wildlife interest would be greatly enhanced by woodland planting and the sympathetic management of ancient woodlands and other habitats. Ecological character would be further enriched by the creation of new areas of heathland and acid grassland, wetland habitats associated with areas of open water, and new meadowland.

Interwoven within this forested landscape would be towns and villages, historic and archaelogical sites, and would new forest-related rural enterprises. Built development would be tied strongly to the Forest, with trees and extensive woodland planting framing new developments and running into urban areas.

Local enthusiasm among resident communities and their political representatives is already running high. The Forest is becoming the focus for arousing local environmental awareness and pride. It is raising expectations for a better economic future in vastly enhanced surroundings. The strategy envisages the harnessing of this enthusiasm into practical involvement and participation in the Forest's development.

Map 7. Indicative forestry areas.



* where new planting may be limited, but not excluded by:– river floodplains; archaeological sites; historic parklands; areas of ecological value and geological interest

Based on DOE Circular 29/92, Indicative Forest Strategies

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OPPORTUNITIES AND CONSTRAINTS

Strategic potential

Forestry is the key element within the National Forest strategy. In future it would become the primary land use in the area and provide the framework within which all other land-using activities would be integrated. There is widespread potential for new planting, with relatively few major restrictions. Land quality and climate are such that all plantable land, without environmental constraints, is feasible for forestry.

The areas of best potential have been identified through an analysis of various land use and technical issues. Opportunities and constraints were identified by a map sieving exercise. This process follows Department of the Environment guidance for preparing indicative forestry strategies [6], and enables four categories of land to be identified (see Map 7).

- Preferred areas — where there are few identified environmental constraints to new planting.
- Unsuitable land — including built-up areas, planned built development and areas of open water.
- Existing woodland — all significant areas of woodland.
- Sensitive areas — where new planting will be limited, but not excluded, by environmental considerations.

These categories provide only general descriptions. The term 'preferred areas', for example, does not necessarily imply that comprehensive planting is appropriate. Conversely, in 'sensitive areas' it will be rare that some form of planting would be wholly inappropriate.

Preferred areas

The greatest forestry potential lies in the largely unwooded, industrially despoiled landscapes of the Midlands Coalfield, which include the majority of derelict land and the most extensive areas of mineral workings. Similar potential is presented in areas of open, intensively-farmed rural landscapes covering the Mease Lowlands, the central and eastern parts of the Coalfield, the central Calke Uplands, central and eastern Needwood and north and western parts of Charnwood. In the Mease Lowlands and Calke Uplands, forestry would be reinstating strongly wooded landscapes that have only disappeared in the past 20 years following the devastating effects of Dutch Elm disease. All of these landscapes contain scattered nature conservation and archaeological interest but lack any major concentrations such as are found in the sensitive areas.

Unsuitable land

Built development

Built-up land covers nine per cent of the area. In local plans there are a further 800 hectares allocated for residential and industrial development, which would take two per cent more land into building.

Open water

Open water covers less than one per cent of the land area. Additional areas could result from restoration of current mineral workings, but even with these the figure is unlikely to rise much above one per cent.

Geology and soils

In the highest parts of Charnwood outcropping igneous rocks and shallow soils of adjacent areas physically restrict forestry. However, this is minimal in area at around 0.5 per cent.

Service lines

The Forest area is crossed by several high pressure gas pipelines, a major oil pipeline and a network of overhead transmission lines. Tree planting wayleaves are required near to these installations but the area affected is less than 0.25 per cent.

Existing woodland

Of the Forest area, six per cent is covered by existing woodland, which is largely concentrated in Needwood, Charnwood and the Calke Uplands.

Sensitive areas

There are two main aspects of sensitivity to forestry planting. The first concerns well-defined, site-specific conservation resources such as SSSIs, other identified wildlife sites, scheduled ancient monuments and other highly sensitive archaeological sites. Secondly, there are larger-scale resources such as river floodplains, areas of historic landscape (most notably parklands), and wider areas of ecological, archaeological and geological sensitivity.

Nature conservation

Around three per cent of the Forest area is covered by SSSI and county-level ecological sites. In addition, district or parish grade sites cover a further six per cent of the area. Much of the interest (56 per cent) is either woodland or open water. Other habitats account for around four per cent of the total land area and it is those that represent constraints upon new planting. It should be stressed that without a complete and comparable survey for the whole area more sites may remain to be discovered.

The main ecologically sensitive areas have been defined through research undertaken by English Nature [7]. They contain high concentrations of individual sites including ancient woodlands, a range of open water and other semi-natural habitats, and historic landscape features with ecological value, such as parklands, early field enclosures and mature hedgerow trees. These areas cover most of Charnwood, the Coleorton area in the Coalfield, and large areas associated with parkland estates and reservoirs in Needwood and the Calke Uplands. Other notable smaller areas occur to the north of Woodville, south of Ashby de la Zouch, south of Heather and east of Thornton. Individual linear features such as river floodplains, watercourse corridors and derelict railway lines are also locally significant.

Geological sites

These include small sites and larger areas of geological interest. Geological SSSIs would be protected from forest planting. On Regionally Important Geological Sites (RIGS), forest planting would be most restricted on individual sites rather than larger areas. The vast majority of geological sites overlap with other aspects of sensitivity.

Archaeology

Scheduled archaeological sites cover only a small part of the area. Taken together with second tier sensitive sites they amount to around one per cent of the total area. However, archaeological records are far from complete and current surveys suggest there are likely to be other undiscovered sites.

Areas of sensitivity have been defined through research undertaken for the Forest team [8]. The major area of sensitivity is the Trent Valley, although other areas to treat with caution include the Coleorton area (Coalfield), the parkland estates in the Calke Uplands and the loose cluster of sites in the Ibstock/Heather area of the Coalfield.

Landscape

The most sensitive landscapes equate with the diverse and relatively unspoilt landscape types identified in Chapter 2. These inter-relate with areas designated for their scenic qualities in the Staffordshire, Derbyshire and Leicestershire structure plans. They include:

- The wooded parkland landscapes of Needwood, the Calke Uplands and Charnwood — typified by many features of high heritage value such as ancient woodlands and historic parklands.
- The historic settlement and enclosures at Coleorton, with its tight-knit pattern of small, medieval fields — the best example in the Forest area.
- The rugged, open summits and areas of distinctive stone field walls found in parts of the Charley area of Charnwood. These are unique landscapes in this area, with a strong upland character that is worthy of conservation.

Historic parklands

Parklands are particularly concentrated in the Needwood, Calke Uplands and Charnwood areas but occur as strong historic features throughout the Forest area. They have high heritage and nature conservation value, provide interest and diversity to the landscape and are important wooded features that contribute to the overall tree cover. Insensitive planting could easily destroy the character of these sites. The Forest strategy would provide the opportunity to help conserve the historic landscape significance of all parks and to promote restoration of their traditional wooded character.

River floodplains

The floodplains of the Rivers Trent and Mease form sensitive areas for statutory flood protection purposes, the extent of land having been defined by the National Rivers Authority.

Summary

The total land area affected by physical planting constraints can be summarised as follows.

	(%)
Built development (existing)	9.0
Built development (planned)	2.0
Open water	1.0
Geology and soils	0.5
Service lines	0.25
Ecological sites	4.0
Archaeological sites	1.0
Total	**17.75** (8,910 hectares)

In addition, six per cent of the Forest area is already covered by woodland.

Forestry options

Although modelled on the New Forest in terms of landuse mix, the National Forest concept goes far beyond both the historical perception of forests, exemplified by Hampshire's New Forest, and 20th century counterparts, such as Kielder Forest in Northumberland. It would be a truly modern forest, blending historic woodlands with varied commercial forestry enterprises and recreation and amenity woodlands. Management would vary according to the priorities of each.

The Forest offers an unprecedented opportunity to grow high quality trees on good lowland farmland on a scale that enables an extensive range of planting options. The Forest would be created through the decisions of many landowners planting trees for many different reasons. Planting options might include:

- commercial plantations;
- farm woodlands;

- game coverts;
- energy forestry;
- agroforestry;
- community woodlands;
- parklands;
- recreation and amenity woodlands;
- nature conservation woodlands;
- urban forestry;
- roadside and watercourse planting;
- hedgerow trees.

Forestry and agriculture

Both the Ministry of Agriculture, Fisheries and Food and the EC have clearly stated that forestry has an increasing role to play as an alternative land use on redundant agricultural land [9]. There is a major opportunity for agricultural restructuring and the integration of forestry as a principal land use. This is especially significant given that more than 70 per cent of planting would be on agricultural land.

Financial incentives for farmers and landowners to plant and manage woodlands are now at their highest and most attractive levels [10]. The convergence of reducing agricultural support and increased forestry incentives could provide a major impetus to new planting.

However, there are other factors that will affect the degree of uptake for planting, and these are discussed in Chapter 5.

Forestry and development

All forms of development offer possibilities for contributing towards forest planting. The degree of planting would be dependent upon the scale of the development and whether it is considered normal development, ie already allocated in structure and local plans, or whether it constitutes forest-related development, ie development attracted to the area as a direct consequence of the Forest plan itself. The role of development in helping to achieve the Forest plan is considered in detail in Chapter 7.

Forestry and minerals

Mineral workings cover almost five per cent of the area and there are substantial reserves of coal, igneous rock, sand, gravel and clay, which indicates that extraction would continue to be a dominant long-term activity. The restoration of mineral workings offers tremendous opportunities for multiple after-use of sites, with forestry providing a framework for recreation facilities, wildlife habitats and tourism developments. Chapter 8 covers these issues.

Forestry and derelict land

The recycling of derelict land also offers enormous potential for multiple after-uses, with forestry providing the setting for recreation, nature conservation and tourism developments. This industrial legacy was one of the main reasons for the Forest proposal in this area and its reclamation should have the highest priority. This would help to build confidence in the Forest and in time provide a more attractive environment for business investment. Derelict land issues are discussed in Chapter 8.

Forestry and transport

Transport corridors form a vitally important first impression of the area. The area is crossed by a network of national and local transport routes. Those crossing the boundary would form gateways, and internal routes would enable visitors to explore the Forest. Landscaping associated with all routes would be a key theme so as to create the appearance of driving into and through a forested landscape.

Major new planting is likely to be undertaken with the Department of Transport's future widening proposals for the M1 motorway and service area improvements at its junction with the A50, and with Leicestershire County Council/British Rail's proposed Ivanhoe railroute linking Burton upon Trent and Leicester, with six new station developments in the Forest area. Many smaller but significant plantings could be undertaken with improvements to the local road network and restoration of the Trent and Mersey and Ashby de la Zouch canals.

Urban forestry

Settlements have been specifically included within the Forest boundary. They are key components of the regional economy and present a major challenge of developing them as Forest towns. There are widespread opportunities for developing urban forestry themes within settlements to complement the rural forest around their fringes. This could encompass everything from street and garden trees to copses and woodlands.

Forestry and utilities

There are many parcels of land owned by water, electricity and gas utility companies throughout the area. There are also several waste disposal and landfill sites. Some of these parcels are quite large, for example the reservoirs owned by Severn Trent Water and the CEGB power station at Drakelow, but there are also scores of smaller sites. Planting around these sites, where practical, would have a significant cumulative impact.

Woodland management

Research indicates that 43 per cent of existing woodlands are between 0.25 and 2 hectares in size and that it is typically these small farm woodlands that are presently unmanaged [4]. Alongside the planting of new woodlands the Forest strategy would offer the opportunity to reinstate management in these woods. Equally important would be encouraging more sympathetic management of Ancient woodlands, particularly to enhance their wildlife interest. Promotion of management advice and the Woodland Grant Scheme and identification of local timber markets would be important factors in stimulating appropriate woodland management.

Timber markets

The scale and future growth in consumption of forest products in Britain offer clear opportunities for providing profitable outlets for domestic timber. In the long term, planting would stimulate demand for new local timber markets. Currently the nearest major sawmills are located close to the Welsh border and many owners have to work hard to find local outlets. The Community Forests of Mercia in Staffordshire and Greenwood in Nottinghamshire, being in close proximity, would also help to stimulate local demand for sawmills, wood processing and woodland-product related industries. The Forest has in its favour an excellent central location, which reduces haulage costs to the major national markets.

THE STRATEGY FOR FORESTRY

The strategy approach

Multi-purpose woodlands

The overriding theme is to create genuinely multi-purpose woodlands, which produce good quality timber, enhance the landscape, enrich wildlife interest and create opportunities for recreation and access. Traditionally, woodlands have tended to be viewed as being either commercial or for amenity. The strategy would offer an unprecedented opportunity to break down these barriers and demonstrate multi-purpose forestry on a large scale. The location, design, species choice and management of woodlands would be dependent upon the prime objectives for planting, but multi-purpose use that combines all or most of the above factors should be the main determinant of planting schemes. In certain circumstances where woodlands are principally managed for one use, for example, nature conservation, then other purposes may be incompatible.

Plantations and farm woodlands will form the majority of planting.

Jeff Pick

Planting targets

The overall planting target is to achieve wooded cover on around one-third of the area, including existing woodlands. The aim would be to establish 70 per cent of this amount within the first ten years. Amounts of planting would vary depending upon the locale, setting and identified opportunities.

Types of planting

Plantations and farm woodlands

Commercial plantations on a large scale and smaller farm woodlands would form the majority of planting. Both have wide applicability and would only be constrained to any degree by poor soils in the industrially despoiled areas of the Coalfield, proximity to urban areas where community woodlands are likely to be the main focus and, for large plantations, ecological sensitivity as in parts of Charnwood. Extensive large-scale planting would be particularly suited to the enclosed farmland landscapes of the Mease Lowlands, rural Coalfield and Calke Uplands and, to a lesser degree, in association with established estate forestry in Needwood and north Charnwood. It is possible to grow up to 100 or so top quality broadleaved final crop trees per hectare from commercial plantations and farm woods. High-quality timber production should be a prime planting objective on these sites. Further details are given in *Farm woodland practice* [9], *Farm woodland planning* [11] and *Establishing farm woodlands* [12].

Recreation and amenity woodlands

The National Forest would be a leisure and recreation forest and woodland planting would need to be designed to accommodate appropriate activities from the outset. Trails, bridleways and cycle routes would be the main means for visitors to discover the Forest. These should form a strategic network of wooded 'corridors', which interlink with more substantial wooded recreation areas. Off-site as well as on-site planting along the routes would be essential to create the appearance of being within a forested landscape. Most of the opportunities for establishing new large-scale wooded recreation areas lie with the restoration of mineral workings and the reclamation of derelict land.

Water sports may be suited to the Trent Valley, but substantial planting would be required to create an attractive wooded setting and, in places, to reduce the noise impact of motorised sports. However, continuous planting around open water should be avoided. The ideal would be an interlocking pattern of forest, open ground and water with dense tree cover merging into low scrub, open ground and wetland or waterside vegetation. Shrub planting would form a significant element of schemes, particularly in woodland edges, as it is quick-growing and robust and would withstand the presence of large numbers of visitors. Using native species would also enhance wildlife interest.

Motor sports would require substantial planting to help baffle noise. Interesting terrain to accommodate a range of activities can be offered by the restoration of colliery spoil heaps, as they can be spread and reworked to emulate natural contours. Site design needs to be carefully planned so that planting accentuates the landform and is integrated within the internal layout. The Forestry Commission produce technical information on forestry establishment on mineral sites [13].

Other recreation facilities such as country parks and forest parks could be targeted on derelict and worked mineral sites near to built-up areas, where both residents and visitors could gain easy access. The aim would be to create formal areas together with areas set aside to be quite wild, using trees to separate a range of uses.

Community woodland planting can draw upon the Community Woodland Supplement, which provides for public access to these woods. It is available Forest-wide but would be of particular benefit in the urban fringe landscapes of the Midlands Coalfield, Trent Valley and Charnwood.

For all sport and recreation developments associated with mineral workings, woodland planting should be undertaken in stages before the whole site is worked out. Given that many of these sites can be in operation for up to ten years this would enable a wooded setting to develop prior to the final restoration taking place.

There would also be a programme of amenity planting developed on land around utilities such as reservoirs, gas and electric installations and landfill sites.

Forestry and development

All new development would need to be integrated within the Forest by woodland planting. In general, insufficient space is allowed within and around development sites for adequate landscaping and as a result new buildings can appear detached from the landscape rather than linking strongly into it. Integration can be best achieved by screening with overlapping woodland blocks or discontinuous wide belts of trees, allowing existing trees to run into a development site, and by designing new planting to break up a densely built appearance. Large-scale development should be softened by off-site planting within its zone of visibility. When this is not practical, commensurate planting could be undertaken elsewhere in the Forest.

Development plans would need to take a long-term view of the allocation of sites for permanent forest planting and forest-related development. Substantial forest-related developments would benefit from advance planting, which creates an appropriate wooded setting within which to fit long-term infrastructure. Forestry could also be promoted as an interim land use to enable short-term vacant sites to be planted.

The scale and form of planting would depend upon the size of the development and whether it constitutes forest-related development or normal development. Pro-rata, more substantial contributions would be sought for forest-related developments (see Chapter 7 and Appendix 6).

Energy forestry

Energy forestry stands on the verge of commercialisation and it is estimated that by the year 2000 it could fulfil all heating supplies in rural areas [14]. Much research into future markets is currently being undertaken by the renewable energy programme of the Department of Trade and Industry.

Energy forestry has potential as an alternative form of cropping and it attracts establishment grants from the Forestry Commission plus the Better Land Supplement where appropriate. Studies by the Institute of Engineering Research also indicate that potential profits compare favourably with those of cereals farms. Promotion and demonstration of sites is needed to enhance farmers' awareness of the possibilities for energy forestry, with education and advice on its implementation to encourage uptake.

Energy forestry would be ideally suited to the moist, fertile ground in the Trent Valley, where both willows and poplars would thrive. On a larger scale it would fit within the enclosed farmlands landscapes of the Mease Lowlands, Calke Uplands and Midlands Coalfield. It could also be promoted as short-term woodland cover on vacant industrial sites and on land programmed for, but awaiting, future mineral extraction. Due to its naturally scrubby nature, energy forestry could be integrated as small plots within hedged fields but on a large-scale should follow Forestry Commission woodland design guidance.

Short rotation coppice — an energy source for the future.

Energy Technology Support Unit

Woodlands for game

Planting woodlands for game has traditionally been undertaken by large landowners but increasingly game coverts are being planted as small woods on farms. With an increasing interest in shooting, sporting use will be a major financial incentive for future farm woodland planting. It has the attraction of providing an almost immediate financial return while with the correct choice of species it can produce a timber crop from 75 per cent of the planted area in the long term.

The Game Conservancy has produced detailed guidance on the establishment of game coverts, and has pioneered the idea of 'instant spinneys' [15]. These provide shooting in the first season after planting and would be particularly appropriate for the rapid wooded appearance they create. Research by the Game Conservancy has also indicated the value for game birds of woods planted for energy coppice. Advice on establishing woodlands for shooting is also provided by the British Association for Shooting and Conservation.

The greatest potential for game coverts would be the wooded parkland and enclosed farmland landscapes of Needwood, the Mease Lowlands, Calke Uplands, Midlands Coalfield and Charnwood. Particular attention to design would be needed in open landscapes so that small blocks did not appear scattered or isolated. Equally, long continuous belts of even width can look artificial and should be avoided. Shrubs should be included along woodland edges to maximise the habitat for game birds.

Agroforestry

Agroforestry is the intimate mixture of trees with farm crops and/or animals on the same piece of land. Agroforestry systems have proved successful abroad (notably in New Zealand) and are now being developed in the United Kingdom. Economic models demonstrate the potential in that the yield from agroforestry can be expected to be slightly higher than from pure lowland sheep grazing or dairy farming and higher than that for a woodland crop [9].

Agroforestry would be particularly suited as an introduction to woodland planting for landowners as it can be undertaken within grazed or arable fields. It would have a wide applicability across the Forest area. Rotation can be between 20 and 45 years depending upon the choice of species, with minimal reduction in agricultural production for the first 15 years.

Nature conservation woodlands

There would be widespread potential for planting new woodlands with nature conservation as the prime aim. There would be particular benefits in siting new woods close to ancient woodlands or species-rich hedgerows. This would maximise ecological benefits by encouraging the development of a diverse woodland flora. Ways of planting and managing woodlands to benefit nature conservation are considered in Chapter 6.

Urban forestry

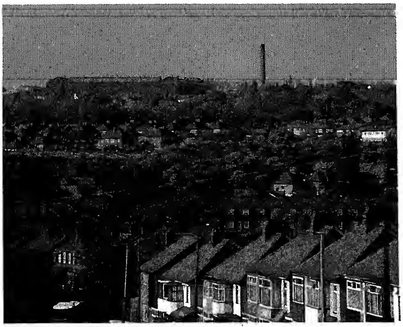
With nine per cent of the area in 'urban' use and the inclusion of sizeable settlements within the boundary, trees within and around urban areas would have a vital role. For many people trees in urban areas would be an introduction to more extensive forestry in the countryside. Urban forestry could be promoted within all towns and villages, using the theme of trees to forge strong links between built development and the rural forest. In the larger towns tracts of derelict land, old mineral railway lines, canal corridors and derelict industrial sites could be particularly targeted. Roads are also important linking features and would provide a focus for planting street trees and avenues along major routes. Wooded links could also be made through a network of municipal and pocket parks in the built environment, grading to less formal country or forest parks on the urban fringe. Opportunities to soften built development where it abuts open farmland on the urban fringe should be particularly seized. On a smaller scale, villages could be targeted for amenity tree planting schemes or initiatives such as community orchards.

Urban forestry could be based upon local initiatives for individual towns and villages. With much built land in public ownership, local authorities are well placed to encourage and coordinate such initiatives. The benefits of the approach would be to improve the appearance of many settlements and create a more attractive environment for stimulating future inward investment. More detailed information on approaches is produced by the Forestry Commission [16].

Gateway planting

Appropriately sited planting along access routes and watercourses that mark entrances into and through the Forest area would be a key theme in order to create the appearance of travelling into and through a forested landscape. The aim would be to create a network of discontinuous wooded corridors with varied types, sizes and widths of planting to allow a sequence of varied views

Bringing the Forest to built-up areas.



Black Country Urban Forestry Unit

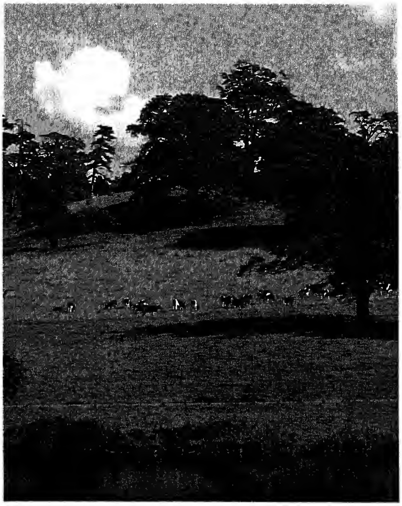
out to the wider Forest. Motorists in particular cannot take in a wealth of detail and the design of planting would need to make travel experiences interesting.

Road margins would be the main feature that motorists see and these must be designed on a broad scale and should relate to the average speed of traffic. Along fast routes large-scale woodland planting would be appropriate, set back from the road in places to introduce finer detail. On slower routes smaller-scale planting of groups of trees and tree-lined avenues would provide punctuation points. Watercourse planting should also express fine detail, with carr copses, osier beds and waterside trees along river corridors, and copses and hedgerow trees along canal corridors. Parallel belts of trees should be avoided. The landscape design requirements of roads and watercourses would need to be defined at an early stage so that they could be incorporated when planting is undertaken.

Historic parklands

Good examples survive of both medieval deer parks and 18th and 19th century ornamental parklands. As well as their historical importance, parklands provide diversity and interest in the landscape and often have high nature conservation value. Replanting of old parkland trees could be promoted and, where opportunities arise, areas of former park reinstated. Replanting will require detailed design and should respect the original design intentions of individual parks. Specialist advice is available from English Heritage and the Garden History Society in planning the restoration of historic parklands.

Historic parklands provide interest and diversity in the landscape.



Jeff Pick

Hedgerow trees

In many parts of the area mature hedgerow trees are a characteristic feature and through their size and antiquity contribute greatly to landscape character. Such old trees provide a sense of continuity and heritage that would contrast with the younger forest. However, many hedgerow trees are mature and in most areas there are few younger replacements. Wherever possible old hedgerow trees should be retained until others have matured to replace them. Coupled with this, natural regeneration of hedgerow trees would be encouraged. Many hedgerows have seedlings, which at little cost can be selected, tagged and left to grow. Replanting need only be undertaken where few hedgerow trees remain and the seed source has diminished.

Symbolic trees

The Forest could also highlight trees that have special interest or meaning. Many examples can be found in our great historic forests such as the 'major oak' in Sherwood, or the fine avenues of trees that grace many National Trust properties.

The National Forest should have its own symbolic trees. The first has already been planted in Moira marking the centre of the Forest, others could mark the Forest boundary. A feature oak tree could be the focal point of each parish or village and, in the towns, mark each ward area. Special landscape features, such as arboreta, avenues of trees and orchards would all add their own elements of surprise, interest and variety to the Forest.

Forest art

The Forest would inspire artistic endeavour. A variety of media, including drama, music, visual arts, events and festivals, would help to interpret and celebrate the Forest and excite interest in it. There would be particular opportunities for working with timber to design site-based sculptures and forest furniture such as seats, gates, fences and signs. A sculpture trail could also be developed as a special attraction and feature of interest.

Forest establishment

Forestry design guidance

The basic principle governing integration of all new planting is that it should relate to landscape character. Planting should integrate with landform or landcover depending upon which is the dominant factor and should complement the particular sense of place of differing landscape types. Sensitive interpretation would ensure a happy integration of forestry within its setting. It would also ensure a strategy-led approach to new planting rather than a purely opportunist one in which any form of planting is undertaken anywhere.

A general principle of approach should be to create a more formal pattern of open space with trees around settlements merging into forest or country park type planting within urban fringes, which grades into more natural woodland planting in the rural countryside beyond.

An environmental audit of all potential planting sites should be undertaken as part of the process of applying for forestry grant to identify any environmental sensitivities. Design factors to consider would include the location and layout of new woodlands, scale, shape and form, margins and edges, species, woodland structure, open land within and around woodlands and design in relation to particular resources (eg water features and catchment areas), land uses (eg derelict land) and activities (eg recreational use).

Leaving an open land element in new plantings would be particularly important given the valuable contribution this would make throughout the forest. Up to 20 per cent of a woodlands area can be open land and remain eligible for forestry grant under the Woodland Grant Scheme. Open land should be managed to enhance its nature conservation interest.

Shrub planting should also be included within planting schemes. Shrubs can enhance the visual interest and conservation value of woodlands and form important elements in woods managed for shooting. Up to 10 per cent shrubs can be included in planting mixes under the Woodland Grant Scheme. Shrubs could be planted with particular effect along woodland edges, beside rides and glades and as a woodland understorey.

Good practice in relation to all of these factors is contained in several specialist publications,which should form reference sources for all potential planters [17, 18, 19, 20, 21, 22]. Specific guidance on the scale, type and landscape design of forestry applicable to each of the Forest's landscape types is detailed in Appendix1.

Species choice

The aim would be to create a diverse forest of predominantly broadleaved character with an initial balance of around 60 per cent broadleaves and 40 per cent conifers. The choice of species would depend upon the management objectives for individual woodlands. Where this is commercial timber production it would be prudent to grow on a large scale a relatively small number of species with known and valued timber markets. These would include oak, ash, sycamore, Corsican pine and larch. Most commercial woodlands would be grown as mixed broadleaved and coniferous plantations, with conifers providing an important early economic return. Other commercially viable species would include poplar and willow grown as short rotation, energy coppice and poplar grown in plantations or as an agroforestry crop.

Where woodlands are planted primarily for recreation, amenity or landscaping purposes indigenous broadleaved species would be preferred. Conifers also have a positive role to play, alongside broadleaves such as alder and birch, as 'pioneer' species on restored mineral, derelict or landfill sites; as a component in development landscaping; and in ornamental plantings such as historic parklands or new arboreta. An evergreen component can also enhance sporting woodlands.

Woodlands planted for nature conservation reasons should normally only include locally native species (Appendix 4) and, wherever possible, use British rather than continental provenance in order to conserve genetic variety. Some species are restricted to particular geographic areas, such as Sessile Oak in Charnwood. Historic ecological variations should be maintained and only local stock planted.

Oak (*Q.robur*) is the dominant indicative tree to the Forest area and should be a key unifying theme across the Forest. An oak theme would retain an important historic link with the area's wooded heritage. With many different woodlands planted for many different reasons the final appearance of the Forest could easily be fragmented. To link the many individual woodlands, which together will form the final canopy, it is recommended that a minimum of ten per cent oak be included in all woodland planting schemes. This could be complemented by a hedgerow oak campaign to regenerate and replant hedgerow trees, particularly in Needwood, Charnwood and the Calke Uplands, where this character remains strong.

Shrubs would also be an important element of planting schemes. Whenever possible locally native species should be favoured as listed in Appendix 4.

Natural regeneration

Planted woodlands would form the majority of the Forest, but wherever it is practical and appropriate the option of natural regeneration should also be encouraged. This would add significantly to the appearance of the Forest by creating areas of 'natural' woodland with a certain 'wildness' appeal. These would contrast with, and complement, more formally planted sites. This type of woodland is a very cost-effective alternative to planting and can achieve rapid colonisation of bare land sites. Small (1982) cites a figure of 517 hectares that have been added to Hampshire's New Forest since the 1880s [23].

Suitable sites to promote natural regeneration could include areas of derelict land, worked mineral sites, old mineral railway lines and open farmland adjacent to existing woodlands where regeneration is evident. Derelict and disturbed sites in the West Midlands have shown the potential, where regenerated woodland accounts for 35 per cent of total wooded cover and has made a dramatic impact within ten years [24]. From a conservation viewpoint, sites chosen adjacent to semi-natural ancient woods would yield particular benefits by maintaining the natural genetic variety and distribution of species [21].

Timber production

Commercial timber production would be a main aim for much forest planting, and it would be essential that planting decisions are made with a future market for the timber in mind. This would influence the scale of planting; the species chosen; the woodland layout — for ease of harvesting; the siting of the woodland — for easy transportation of timber off the site; and the type of management that is adopted. In some areas the load-carrying capacity of minor roads might also be important.

To meet the needs of national markets timber would need to be grown to a required specification and in sufficient quantity. Cooperative timber marketing would help with this and would be of particular importance in areas where there are many owners looking to sell small parcels of farm woodland timber independently. Improving the information available to all woodland owners on timber marketing would be a high priority. It would also be important to promote new local wood processing and wood-using industries to generate forest-based markets. With wood-using industries, the aim should be to maximise added value in manufacturing by integrating wood production fully into the local economy.

Management issues

Ancient woodlands

Ancient woodlands are those that have had continuous wooded cover since at least 1600. They account for 46 per cent of existing woodland cover in the Forest and represent the final core of sites that retain a link with the area's former forests. Ancient semi-natural woods are the most important, with very high nature conservation interest. All ancient woodland sites require sensitive management and every opportunity should be taken to enhance their ecological value. Detailed management guidelines are available [25, 26, 27, 28].

Ancient woods could attract special management grants from the Forestry Commission.

Small woodland management

Small farm woodlands contribute significantly to local landscape detail but many are presently unmanaged and reaching maturity. The diseconomies of scale of such operations and the often difficult access for timber extraction hamper cost-effective management. Many owners of small woods also lack both woodland management skills and an awareness of the potential value of their woods. To help bring neglected woods into active management there is a need for readily available information and advice about the opportunities for selling farm woodland timber profitably and the financial incentives for reinstating management.

Hedgerows

Hedgerows are prominent features throughout the area but many individual hedges are closely trimmed or gappy. Hedgerows would form important linkages between blocks of new planting and in many instances would be incorporated as edges to woodlands. Where hedges are to be retained they would benefit from being managed more positively as wooded landscape features. This would include allowing hedges to grow thicker and taller (above 1.5 metres) and replanting gappy hedges. There is also potential to move away from hedgerows being excessively tidy and low cut. Management could favour trimming at three yearly intervals to improve wildlife interest. Hedgelaying, or coppicing where hedges are spindly or gappy at the base, should be promoted. The Hedgerow Incentive Scheme can provide financial incentives.

Management of deer

The planting of the Forest would be likely to attract large numbers of deer into the area in the future. Potentially increased deer populations could damage new plantations through browsing and could prove a hazard to motorists when they move between forested areas crossed by roads. Monitoring and managing deer populations would be required. The Deer Society and Forestry Commission provide specialist advice.

OPPORTUNITIES AND CONSTRAINTS

Overall potential

The Forest strategy would provide a unique opportunity to develop a diverse range of sport, recreation and tourism experiences, integral to its own development. Its excellent accessibility, varied existing resources and opportunities and drawing potential as 'The National Forest' would contribute to a highly successful recipe for meeting a growing demand for participatory enjoyment of the countryside [29].

The creation of the Forest would provide a new destination, offering optimum accessibility to attractive forested countryside potentially encompassing a range of high-quality recreational facilities for all abilities, ages and groups. It offers the chance to plan a substantial, integrated resource based upon outdoor activity. Being sited close to neighbouring Midlands attractions, would strengthen its appeal as a visitor destination.

The Forest itself would do much to reverse the external image of the area and the poor overall appeal of its landscape, towns and villages.

The Forest would provide a recreation resource for local residents and surrounding towns and cities and a national resource for short breaks and longer stays by people from across the country. The potential users include a local community of 187,000 people, a population of ten million within a 90 minute drive for day-trips, and 29 million within 2½ hours drive for short breaks. It is estimated that the Forest would attract at its peak around 5.9 million visits per year, 90 per cent of which would be day-trippers [1].

At present local provision of recreation facilities is not untypical of many other parts of the country but they are wholly uncoordinated and relatively unpromoted. Countryside enterprises and accommodation are sparse and there is a lack of attractions that have family appeal.

The attitude of the planning authorities and the nature of development plan policies could prove to be either a positive mechanism for achieving appropriate Forest facilities or a major constraint.

Furthermore, in an area where on the whole, and with the notable exception of Charnwood and other specific sites, recreation demand has been low, there would need to be a major change in attitude and approach to the potential opportunities and problems it can generate.

In the quieter, rural areas there would be resistance to the anticipated disturbance, particularly if no economic benefit is believed to accompany it.

Accessibility

Three fast north–south routes (M1, M42/A42 and A38) provide visitors with excellent road access and this will further improve with planned improvements to the regional network. Over time, rail access will also be significant. Burton upon Trent station is within 90 minutes of Sheffield in the north and Cheltenham/Gloucester to the south. The Ivanhoe line will extend east–west access across the area and provide a 90 minute rail link from London, via Leicester.

However, the very excellence of the road system into the Forest area may also represent a weakness. The north–south routes all carry fast-moving traffic through the shortest part of the elongated shape of the Forest boundary. Drivers may be through the area before they are aware they were in it!

Conversely, the internal network of roads and the slow, crowded east–west routes, could well come under severe strain as and when visitor numbers increase.

Components of opportunity

Trails and access

Walking is a major reason why people visit forested landscapes and there is an increasing demand for trails, guided walks and walking holidays [29]. There is a similar growing demand for riding and cycling routes. Cycling in particular has seen a dramatic increase in recent years with the advent of the mountain bike. Horseriding, too, is popular in the area.

As to recreational rights of way and paths in the area, although reasonable in quantitative terms for walkers (90 per cent of the network is footpaths), a great deal needs to be done to put them in good usable order. In contrast, there are not enough bridleways and off-road cycle paths to meet existing demand. Bridleways are particularly poorly represented, comprising only 6 per cent of the network, as against 13 per cent nationally [30].

An extensive and high profile network of trails and access routes for walkers, cyclists and horseriders could be developed in the Forest. More readily available opportunities might be afforded by a legacy of derelict mineral railway lines, linear water features, and an extensive rights of way network, albeit in variable condition, and the potential to develop new forms of site-specific access. Mineral railway lines in particular could serve multiple uses and, as many cut through urban areas, would link settlements with the Forest. However, the biggest challenge would be to develop interlinking trails and walks that connect all of the major access, tourist and leisure locations in the Forest. There is also potential for developing scenic car driving routes and trail riding routes for motorcycles.

There are already some walking trail initiatives under way, such as the Moira/Measham trail and its connection to the Ashby Canal and Ticknall. There are on-going improvements to rights of way in the Branston/Needwood area and in North West Leicestershire through the Waymark 2000 and Parish Paths initiatives. In addition there are proposals for a long distance path and cycle route along the Trent Valley, the Sustrans Dover to Inverness cycleway to cross the area, towpath improvements to the Trent and Mersey canal, and feasibility studies to develop access along the derelict Ashby and Charnwood canals. The Ivanhoe railroute would enable new access routes to be developed from the six stations that provide stopping-off points within the Forest boundary. However, these initiatives are uncoordinated.

Success in developing trails and access would hinge on the attitudes of private landowners towards public access on their land and the opportunities they see for meeting demand in ways that are beneficial to them. Commercial farming has been the dominant land use, and the prospect of greatly increased free public access over farmland and forested private land worries the farming and landowning community. Permissive and improved access within management agreements may be acceptable but the compulsory imposition of statutory rights of way or access would be strongly resisted.

Outdoor recreation areas

There are several existing areas for major public access including:

- Bradgate Park, Beacon Hill and other sites in Charnwood;
- Calke Abbey, Staunton Harold and Foremark Reservoirs;
- Branston Water Park and the Trent and Mersey canal towpath;
- Burton upon Trent washlands;
- Jacksons Bank woodland in Needwood.

All are very popular and heavily visited. Bradgate Park and Beacon Hill are exceptionally so, with an estimated 1½ million visitors per year. The Calke Abbey, Staunton Harold and Foremark Reservoirs complex attracts more than 600,000 visitors per year. This demonstrates the potential drawing power of extensive, high-quality public access areas, to the extent that pressures on the Charnwood sites are already acute. Conversely, it shows how little land there is where outdoor recreation is welcomed.

The Forest strategy provides scope for creating substantial new areas to act as counter attractions to those presently reaching capacity. Already a number of new access sites have been established and several major sites are under development.

In the future other areas with special potential could relate to current and future opencast coal and derelict land sites in the Midlands Coalfield, the aggregates extraction sites in the Trent Valley, and, in the longer term, the granite quarries in Charnwood. The Trent Valley in particular offers opportunities for outdoor recreation associated with water from the flooding of former gravel pits. Elsewhere, new country or forest parks could be created, such as the one proposed at the Coalfield North former opencast site; pocket parks could also have a place in urban areas.

The main factors influencing the realisation of these opportunities would be the willingness of minerals operators and other landowners to release land for these after-uses and the strength of development plan policies to seize this potential as it arises.

Sport and leisure

The Forest could accommodate a wide range of sport and leisure activities given its strong base of water resources, the potential offered by extensive areas of derelict land, current and future mineral extraction, the re-use of agricultural land, and the scope for developing attractions that are especially suited to a woodland setting. With considerate siting and, of course, appropriate planting, the Forest might provide for those sports that currently find location a problem.

Opportunities for water recreation include both non-motorised and motorised activities. Canoeing and windsurfing have grown considerably in recent years and angling remains one of the most popular national activities. Motorised sports such as water-skiing and jet-skiing have also seen rapid recent growth. However, these and many other activities are constrained by the lack of suitable water.

The Forest could provide a unique opportunity to establish accessible water on a large scale, in particular in the Trent Valley. Here, through the use of planning conditions and obligations, aggregates sites could be restored to form an extensive chain of lakes and pools. This would allow for multiple water-sport and recreation use, including both motorised and non-motorised activities. Similar site-specific opportunities could also be afforded on appropriate worked mineral sites elsewhere, as well as on areas of derelict land and suitable farmland. Such initiatives could extend and complement the variety of non-motorised activities provided on Severn Trent Water's reservoirs, all of which could take some extra capacity.

In addition there are opportunities to develop popular water-based activities such as canoeing and rowing along the River Trent and the Trent and Mersey Canal. Current proposals include improving accessibility for leisure boating on the Trent and Mersey Canal, with provision for mooring areas and a marina. A feasibility study has also been undertaken into the rewatering of the derelict Ashby Canal between Moira and Measham. All of these waterways have potential to develop as gateways into the Forest.

There are presently no formal facilities for motor sports but this is an activity that is increasing in popularity. The Sports Council has identified the need to develop motor sports centres to cater for different specialised forms of the sport. Noise and the lack of suitable accessible sites away from settlements are constraints that frustrate development. There may be potential for such activity in the mineral and derelict land areas or on appropriate farmland, where earthworks to create suitable terrain and extensive landscaping to baffle noise could be undertaken.

Archery, orienteering, paintball (playing war games in a woodland setting) and shooting are all activities directly relevant to woodlands. All form relatively small markets but paintball, orienteering and clay pigeon shooting have seen considerable growth in the past ten years. Rock climbing in disused quarries also has potential in the Forest. Research indicates trends for further challenging and adventuresome activities of this kind, all of which could be accommodated in the Forest, with due regard to local sensitivities, especially nature conservation.

The other main sports opportunity is to meet the exceptional growth in, and demand for, golf. There are already ten courses in the area, with nine other proposals. However, a major gap in the market appears to be for 'Pay as you play' and novice courses. Golf courses could be sited virtually anywhere and would be well integrated with woodland planting.

Visitor attractions

Demand for visitor attractions comes from both staying tourists and day-visitors. Leisure day trips to the countryside have experienced considerable growth over the past 20 years and the potential for further growth is large [29]. Nationally the most popular attractions visited in 1990 were historic properties, museums and galleries, wildlife attractions and gardens. The current performance of attractions in the strategy area is varied (see Chapter1). The sizeable figures achieved by some show the potential market opportunity. The limited performance of others provides a challenge to strengthen their contribution.

The opportunity exists to build upon a number of locally indigenous themes including industrial heritage, industrial tourism and historic associations, and to develop new themes based upon woodland attractions.

The industrial heritage theme has a developing focus at Snibston and Moira. Snibston Museum of Mining and Discovery Park is particularly significant as it anticipates attracting more than 200,000 visitors per year. There is also scope to integrate many smaller sites associated with the industrial past. The brewing heritage of Burton also has special interest, with increased market potential.

Industrial tourism provides the opportunity for commercial enterprises to open their doors to visitors. Despite the possible operational and managerial constraints, 'workplace tourism' has a growing market. McVities in Ashby and Marmite in Burton are well-known names with potential visitor appeal.

The theme of historic associations centres on Ashby de la Zouch castle and its connections with Ivanhoe. The Ivanhoe theme is being marketed by North West Leicestershire District Council with proposals for events and exhibitions associated with the castle. With a higher profile, this would be an added attraction of the Forest.

However, the prime attraction would be the woodland itself. This would provide major opportunities for developing specific new woodland attractions. As yet there is no National Forest central physical focus or presence and this would need to be developed as an attraction in its own right. There are also many other features that could benefit from the National Forest theme, such as arboreta, wildlife attractions, forest art, farm attractions and craft centres.

There would be particular places, features and aspects of the forest that could be interpreted through site-specific facilities. A number of proposals for visitor centres are already under consideration.

Accommodation

The success of the Forest as a visitor destination would be partly determined by the quality and range of accommodation provided. At present it is business people who use the accommodation and this is reflected in its nature. The forest setting would provide opportunities to locate types of accommodation more attractive to the tourist. Much of the demand for serviced accommodation in the short-to-medium term is likely to be absorbed by existing provisions in the area, which run well below capacity. Business users, for instance, tend to vacate at weekends.

THE STRATEGY FOR SPORT, RECREATION AND TOURISM

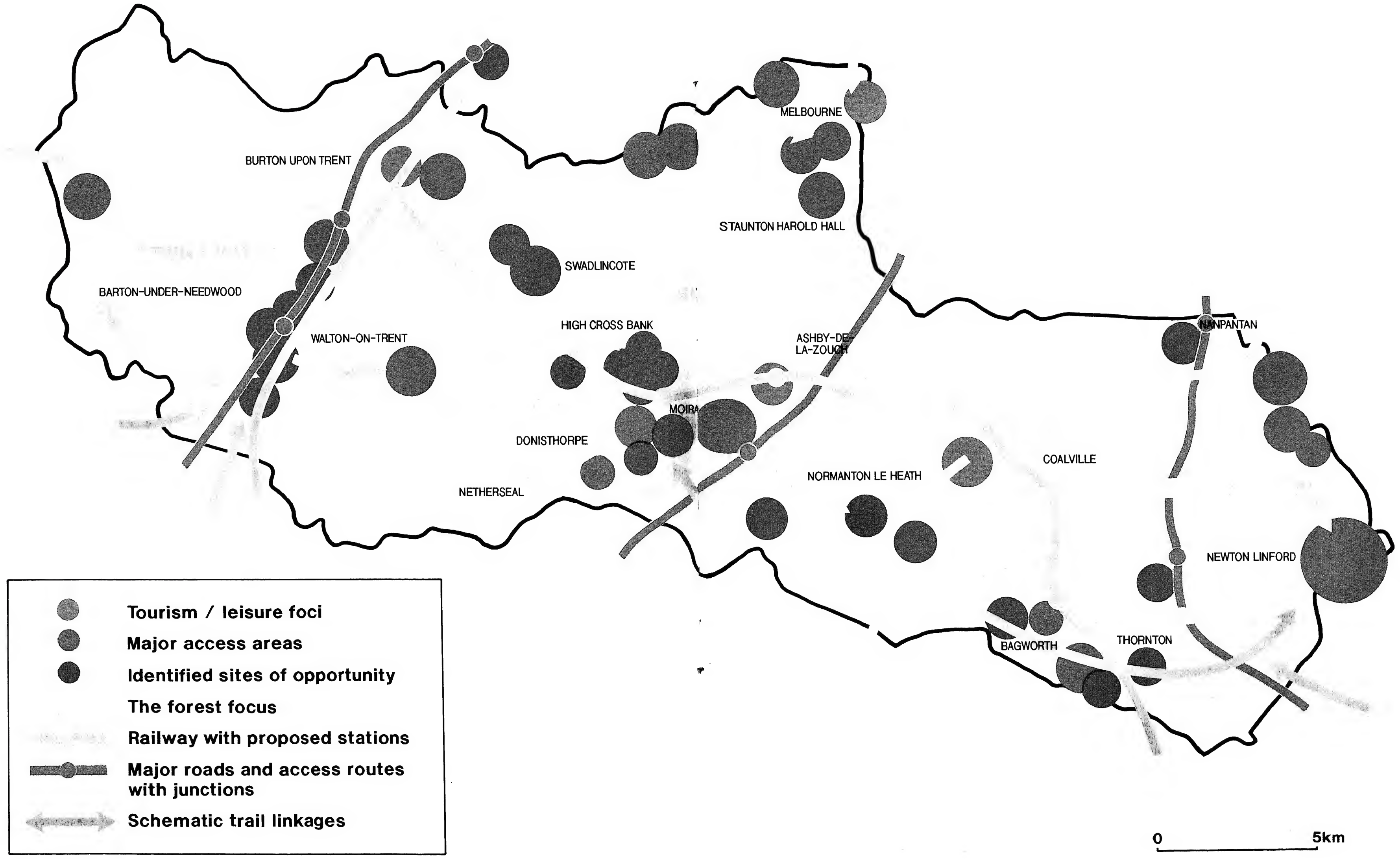
The strategy approach

Leisure and tourism are key components of the strategy. Together with forestry, agriculture and industrial and commercial activity, they would provide the future basis for economic and landscape sustainability of the Forest area. From the outset, therefore, the Forest would be planned as a recreation forest, with woodlands providing the context for developing leisure and tourism initiatives. Commercial returns from leisure and tourism would need to be seen alongside, and to help justify, involvement in woodland planting.

Leisure and tourism development would need to be carefully integrated and managed to ensure that it did not threaten the natural 'green' resource on which it would depend. Siting of facilities would be particularly important to ensure that new development would be both in harmony with, and contribute to, its forest setting. High quality facilities would be of the essence.

The impact of large numbers of visitors upon local communities would need to be minimised through careful visitor management. A sense of involvement would need to be fostered among communities, who would share the developing woodland with visitors and benefit from them.

Map 8. Sport, recreation and tourism.



National principles that guide sustainable leisure and tourism development should be followed [31].

Most sport, recreation and tourism initiatives would benefit from being sited in a wooded setting. However, planning of facilities need not wait until a mature forest setting is in place. Development could be encouraged alongside new forest planting to ensure that leisure and recreation benefits are maximised at the earliest opportunity. It is envisaged that leisure and recreation sites would form the primary land use on around five per cent of the land area.

To achieve its full potential the Forest would need to provide four key components.

Exceptional accessibility

- **To the Forest:** by car, capitalising on the fast motorway network and links in to strategically placed car parks and information centres; by train, with the exceptional opportunity provided by the Ivanhoe line; and by canal boat, footpath and bridleway links from surrounding areas.
- **Within the Forest:** by developing a comprehensive network of rights of way, including serviced routes and trails that enable visitors to walk, cycle and ride confidently in a safe environment; supported by a comprehensive system of public transport that maximises use of the Ivanhoe railroute and promotes local bus services.

A diversity of outdoor activity available to everyone

The Forest could offer a rich diversity of high-quality outdoor sport and recreation that is not matched elsewhere. Emphasis should be on easy availability at all times, for the novice or family group as well as for those with more experience — participation should be the theme rather than standard of performance.

A creative woodland experience and image

The Forest would need to develop a strong image and awareness across the country through creative marketing. It should be a forest image — true to its name and reinforced by visitor experiences that creatively present and interpret woodland themes.

High-quality accommodation linked to sport and leisure

A range of high-quality accommodation of all sizes that is able to attract its own markets and win considerable repeat business would be needed.

Areas of opportunity

Immediate effort could be concentrated on areas that are currently either derelict land sites or subject to mineral working (with due regard to any nature conservation sensitivities and opportunities – see Chapter 6). These cover around six per cent of the Forest area (see Map 8) and include:

- Ashby Woulds/Donisthorpe opencast coal/ derelict areas;
- Trent Valley aggregates area;
- Heather/Bagworth opencast coal/derelict areas;
- Lounge opencast coal site;
- Swadlincote opencast coal areas;
- Charnwood granite quarries, in the long term.

Due to their large scale, these sites have the potential for the development of a wide range of sport, recreation and tourism after-uses. Together with existing access areas and leisure foci they could form the main sites for attracting and channelling large numbers of visitors. Restoration might aim to accommodate one or more of the following uses.

- **Public access opportunities to walk, ride and cycle,** which could be accommodated in large recreation areas such as country or forest parks or, in the case of small-scale sites within or adjacent to urban areas, the development of pocket parks, as pioneered by Northamptonshire County Council. Public access should be given high priority, as these sites would provide some of the best opportunities for 'open access' provision in the Forest.
- **Provision for fishing, golf or water sports within a wooded setting.**
- **Provision of facilities that can only be provided in a planned landscape,** such as motorised sports or visually-intrusive new development in the form of major attractions and/or accommodation.
- **Landscaped sites allocated to establish a mature wooded setting for long-term forest-related development.**

This range of options could be applied to other areas of opportunity that may arise in the future. This would include areas of appropriate farmland as well as derelict land and former mineral workings.

Trails and access

It is envisaged that much of the Forest area would eventually be accessible through the development of walks, trails and sites offering new access opportunities.

Walks

The provision of short walks should be a basic resource in all parts of the Forest. These should radiate from all of the access areas and tourism/leisure locations (see Map 8) and more widely using the rights of way network. The following would be required.

- A systematic programme to improve, waymark and maintain rights of way. This would take as its base the National Forest rights of way and access survey and promote the Parish Paths Partnership schemes as a means of implementation.
- Coordination of existing walks and information provision within a common Forest identity.
- New circular walks in access areas or more generally in the countryside, for example in villages that have car parking and other facilities or adjacent to mooring areas beside canals.

Trails

Strategically, and in terms of national appeal, an east–west long distance Forest trail could be developed, together with a network of interlinking trails that provide for walkers, cyclists and horseriders. These routes should link with all of the major access, tourist and leisure locations, the Ivanhoe line stations, forest gateways such as the Trent and Mersey canal, and should connect with long distance routes outside the Forest. A fundamental priority would be to ensure that a high proportion are off-road.

Some trail initiatives are already planned, others are under way. All of these would be encouraged. However, there is a need to look at the overall network to create a comprehensive and hierarchial system. Work on new horseriding and cycling routes particularly is required, as there are presently not enough bridleways to provide sufficient off-road riding and cycling networks. Key areas for developing trails are listed in Appendix 2 and shown on Map 8.

New access

In addition to new site-based access in areas of opportunity, other forms of access should be sought and the following opportunities explored.

- Encourage land acquisition, which provides access.
- The use of old mineral railway lines. Possible routes are listed in Appendix 2.
- Seeking permissive routes with landowners through the following:
  - —grant-aided mechanisms such as the Community Woodland Supplement to provide access to newly-planted woodlands; the Countryside Stewardship scheme to secure new access to historic, heathland and waterside landscapes; and through set-aside of agricultural land, coupled with schemes such as Countryside Premium, which is presently not available in the Forest area;
  - —negotiated mechanisms such as access and management agreements.

While every encouragement will be given to landowners to provide permissive access, it should be stressed that there would be no compulsion for public access to private land.

- Examining the potential for creating new horseriding routes along appropriate roadside verges and along field margins, which could be associated with set-aside and the development of conservation headlands.
- Examining the potential for a system of Forest toll routes, which have been developed in other areas for horseriders and may be applicable to cyclists.
- Examining the potential for creating new canal towpaths, either side of the canal, in connection with the proposed restoration of the derelict Ashby de la Zouch and Charnwood canals.
- Themed trails would enhance visitor appeal of the Forest and these could be designed to reflect various aspects of the area, including industrial heritage, social, cultural and landscape history, wildlife, geology, water resources and the story of the developing Forest.
- Trails and access to sites would need to be designed to accommodate the needs of people with disabilities. Research is needed urgently to identify and apply best practice.

It will be very important to explore opportunities for developing multiple-use along certain trails. Derelict railway lines and canal towpaths could have particular potential and certain trails through woodland and across farmland

An accessible forest will be a key theme.

Water sports would be encouraged on reservoirs, restored mineral workings, canals and rivers.

should also be examined. Multi-use trails should particularly favour horseriders, cyclists and disabled users.

Sport and leisure

There may be potential in the development of water-based recreation, motor sports provision, the promotion of woodland-based activities and golf.

Water sports

For water recreation the major potential would be provided by the Trent Valley aggregates proposals. These would generate large amounts of water space to be developed for a wide range of high-quality sports and recreation facilities. The sites are well located, with access from the A38, and there is relatively little residential development nearby. In particular, noisy sports such as water-skiing and jet-skiing could be accommodated.

Other areas of water space could be developed in the Midland Coalfield, with the restoration of coal sites for recreation and amenity use or as part of a landscaped setting for future forest-related development. Individual farmers and landowners would also have a key role throughout the Forest in developing water areas for angling or limited sailing and windsurfing suitable for novices and casual users. There are examples of both, in and around the Forest area, with good levels of use.

Greater use could also be made of canals and rivers. Specific initiatives might include:

- extending existing rowing facilities on the River Trent to create a major rowing centre;
- promoting improved canoeing access to the River Trent at Burton upon Trent;
- promoting the Trent and Mersey canal as a long-distance canoe trail;
- proposals by British Waterways to develop opportunities for canal cruising, with additional boat moorings and facilities on the Trent and Mersey canal as stopping points offering potential for developing circular walks;
- promoting the re-watering of parts of the Ashby de la Zouch and Charnwood canals to provide new gateways into the Forest;
- promoting links with the Coventry, Birmingham and Fazeley canals to the south of the Forest for canal cruising.

In addition, all existing areas of water space would benefit from better promotion and more flexible usage. Some facilities, such as sailing on reservoirs, are not being used to full capacity, while others, such as angling on canals could have wider availability. For all water users there would be a need to cooperate in shared management of existing waters and to seek new opportunities.

Motor sports

The possibilities for accommodating motor sports activities — which need or benefit greatly from a wooded setting — should be considered. With the difficulty of securing adequate sites elsewhere and good permanent and temporary sites being at a premium, the Forest area might accomodate an integrated motor sports centre. This could cater for activities such as karting, sprints, hill climbs, scrambles, autocross, stage rallies, trials, auto-tests and trail riding. Any site would need to be developed as an exemplar of good design: possible locations might include restored mineral workings in the Trent Valley or on an opencast coal or derelict land site in the Coalfield. It could be used for education and training and to provide facilities for the beginner and casual visitors.

Temporary sites, within a well-wooded context, could possibly accommodate stage rallies and trail riding. They would need to be well managed. As clubs, participants and spectators pay for access that would offer commercial opportunities for private landowners.In order to maximise the use of one site there may be scope for combining different types of activity in one area.

Woodland-based activities

Archery, orienteering, paintball and clay pigeon and rough shooting are all activities that could be associated with new woodland planting. The common theme for these activities is the need for access to appropriate sites by relatively few people for limited periods of time. Farmers and landowners would be ideally suited to provide access for these activities on a temporary basis, making income through a small rental charge or by offering a system of day tickets. To attract wider use by visitors, permanent sites could also be accommodated, where major events might be held.

For archery, paintball and orienteering only limited infrastructure and supervision is required. Clay pigeon and rough shooting involves more careful planning. Rock climbing could be planned within disused quarries with due regard to nature conservation sensitivities. In all cases the landowner should be encouraged to work with a suitable club or organisation to establish these facilities.

Golf

The overall demand for golf facilities may be easing in the region but there appears to be a need for more accessible facilities for novices and casual visitors. Priority might suitably be given to accommodating:

- new pay-as-you-play courses;
- rough courses for beginners, which can be developed relatively cheaply;
- facilities linked to accommodation, which will attract or be of benefit to visitors to the Forest;
- one championship high-quality course that would attract special events.

Background infrastructure

Many local leisure facilities would not be attractions in their own right or integral to the Forest concept but could be used by visitors once they had arrived in the area. Visitors would help support such local facilities.

Development opportunities over time could include:

- investment in improved swimming facilities, tennis courts and play facilities;
- voluntary sector activity to provide bowling greens and other community facilities, including local events;
- provision of accommodation-based swimming, tennis, squash, gymnasia and commercial entertainment and activities.

Visitor attractions

The primary attraction would be the woodland itself, together with opportunities for access and outdoor recreation. Visitor attractions would also be important to add diversity to the appeal of the area, notably for short breaks. The approach might be to strengthen the appeal and performance of existing and indigenous attractions, and encourage strong new attractions based on forest themes, and small-scale initiatives developed within villages and communities. It is also possible that the Forest would attract sizeable commercial proposals in the future. Individual projects would be treated on their own merits.

Existing attractions

The strongest indigenous theme is industrial heritage and much more could be made of the many small sites associated with the area's industrial heritage, for example in relation to early mining in the Coalville/Coleorton area. More could also be done to develop farm visits, factory visits and to support creative events such as the Burton upon Trent beer festival.

Forest visitor centres

The Forest would benefit from a major physical focus in the heart of the area from which to promote and develop an identity and to provide a major orientation and information point for visitors. A National Forest visitor centre might form this focus. To complement this there would probably be a need for other visitor centres throughout the area, forming strategic gateways into the area.

The natural location for the main centre would be the area around Ashby de la Zouch and Moira, for the following reasons:

- it is the geographic centre of the Forest;
- Ashby de la Zouch is an existing tourism focus with great inherent appeal for visitors;
- it is on both the A50 cross route and near to the A42/M42, which is likely to be the dominant gateway to the Forest;
- it is on the Ivanhoe line, with stations at Ashby de la Zouch and Moira;
- it contains the existing initiatives at Moira Furnace and nearby trails;
- it contains the Ashby Woulds major area of opportunity, which has the potential to be a model for leisure and recreation development within the Forest.

The centre could be a focus for trails and services associated with them. It should appeal to families, who would provide the major element of the market, and should have a well-focused educational content for schools and other groups. Some of the main themes a centre might include are listed in Appendix 3.

A range of other visitor centres could assist the interpretation of specific themes within the forest, such as the demonstration of good woodland and forestry practice. The latter might be best served by the Forest Enterprise/South Derbyshire District Council site at Rosliston. There are also proposals by Leicestershire County Council at Beacon Hill Country Park, Severn Trent Water at Foremark Reservoir, and British Waterways on the Trent and Mersey Canal.

Forest themes would also be taken forward elsewhere and would include the location of craftsmen, woodland-related events, catering and retailing opportunities and the creative interpretation of different types of woodland. In this respect, special attention should be paid to encouraging initiatives in villages and local communities.

Identifying and interpreting vistas and viewpoints throughout the Forest would also be important.

Accommodation

The development of visitor accommodation would need to be phased. It would need to be demand-led and would depend upon the rate at which local demand developed in relation to existing capacity and upon the opportunity to generate new markets through the quality of facilities provided.

In the short term, demand would be small and opportunities are likely to rest with:

- additional caravan and camping sites, which should be related to existing facilities, such as the reservoirs, to maximise commercial viability;
- accommodation linked to activities such as riding centres;
- high-quality self-contained leisure developments;
- improvements to existing hotel accommodation.

In the medium-term, as the Forest began to take shape, the level of demand could rise. Steps to accommodate this include:

- group accommodation in camping/bunkhouse barns, youth hostels or related to outdoor/education pursuits in activity centres, field study centres or school/college buildings;
- new farm-based bed and breakfast and self-catering accommodation;
- adding rooms to pubs and inns;
- extending the provision of budget and business hotels for leisure use.

In the long-term, when the Forest destination would be established, demand for significant leisure-based accommodation is envisaged. This could include:

- high-quality 'resort' accommodation and leisure facilities such as a holiday village, country house hotels and country clubs;
- good quality serviced and self-catering accommodation for short breaks, eg log cabins, converted outbuildings in a woodland setting, high-quality caravan and camping sites, activity centres and additional budget hotels;
- a comprehensive network of small-scale rural bed and breakfast and serviced farmhouse accommodation and inns with rooms — all well related to the trails network.

Information

An information campaign would be required to create public awareness, and to channel enquiries and interest. This might include:

- producing information material on sport and recreation facilities and on public access, using the corporate identity of the Forest;
- establishing signs and information boards at key locations, providing simple information about the Forest;
- promoting or establishing a series of events that draw attention to the Forest — this could include building-up and linking existing events under a joint Forest Festival programme and establishing new events, such as a Forest tree planting day or a major new sporting event, for example a 'Forest Triathalon'.

Initially this information would be aimed at local people and existing visitors, as well as seeking general regional and national media coverage. A strong Forest image that captured people's imagination would need to be presented from day one, even though the initial message will be "Come and learn about the Forest that is developing".

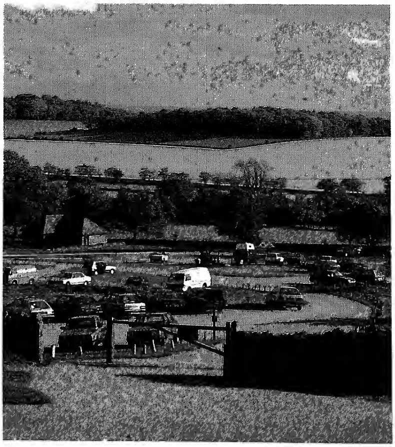
Traffic management

The Forest would need to be made available to leisure traffic without encouraging unlimited car access to all areas within it. A high priority would be to develop public transport and encourage visitors to use it. This would maximise use of the Ivanhoe railroute and promote local bus services. Park and ride facilities that link with strategically placed car parks would be encouraged.

Car parks would be most suitably sited at all sport, recreation and tourism attractions, at visitor and information centres, Ivanhoe railway stations and adjacent to main road routes into the Forest, especially near major intersections. Areas that would be likely to see particularly high visitor usage and that would need special provision are the highly accessible Trent Valley and Midland Coalfield and site-specific locations in the Calke Uplands and Charnwood. Elsewhere, sites would need to be identified for appropriate small-scale car parks that are linked to picnic areas and local walks. All parking points would provide information about the Forest and would link into the wider trails network.

Car parks would need to be designed to a high standard to appear unobtrusive and blend naturally into forested settings. They should be seen as positive opportunities to achieve high-quality new planting.

Developing the Forest will require careful visitor management.



Mike Williams/Countryside Commission

Leisure traffic would also benefit from well-marked scenic driving routes that help channel the movement of vehicles within the Forest. Routes would need to be planned to allow exploration of the Forest while retaining the peaceful qualities of parts of the less accessible rural areas in Needwood, the Mease Lowlands, Calke Uplands and Charnwood.

Visitor management

The Forest would have the potential to become a major recreation and tourist attraction, with the prospect of attracting large numbers of visitors. This would have widespread management implications and would require the establishment of well-resourced forest ranger services and countryside management schemes.

Ranger services would be particularly important in assisting with people's enjoyment of the Forest through the provision of information and educational/interpretive material. Expertise from forests elsewhere points to the sense of safety that visitors feel knowing that a ranger is around. Rangers would also act as points of contact for site management problems identified by landowners. Ranger services would need to operate at both site-specific recreation and leisure locations, as well as in the wider Forest.

Countryside management schemes would complement ranger services by undertaking small-scale projects to maintain and improve access, and by initiating landscape enhancement works associated with the trails network.

OPPORTUNITIES AND CONSTRAINTS

Farming

Agriculture has shaped the great majority of the land in the National Forest. It would have a continuing and vital role.

Even with around one-third of the area planted with trees, substantial tracts of land would stay in commercial agricultural use. Farmland would provide an important and complementary open land element in the Forest. A proportion of the farmland would become more multi-purpose in response to demand arising out of the Forest objectives and use. In particular many areas may offer new access. It would therefore be important that farmland remained well managed from both an agricultural business viewpoint and a Forest landscape perspective.

There is much good quality farmland in the area that would remain eminently viable to farm. Agriculture would remain a primary land use, if not as dominant a one, and a vital element in the local economy and social structure.

Farmers and landowners would have a key stewardship role in the development and future management of the Forest. It would be essential that there was a healthy, financially sound agriculture to enable this to happen. Such management would embrace the farmland and associated woodlands themselves, hedgerows and field margins, nature conservation habitat, rights of way and negotiated access — all of which are integral to the Forest concept.

Detailed research into farming within the Forest area [3] reveals it to be complex but not untypical of much of lowland Britain in terms of the farm structure, types and regimes (see Chapter 1). All of the signs indicate a significant change in the structure, pattern of farming, profitability and attitudes of the UK farming industry over the next decade. The pressure for farmers to find other sources of income will rise.

The five main determinants of future farm viability are farm size, land quality, type of farming, levels of borrowing and management ability. Financially strong and successful farm businesses will seek to expand and add value to their products. Less entrepreneurial businesses may turn to various EC support schemes or dwindle away over the years. All farms may expect environmental considerations to play an increasing role in agricultural policies and support.

The reaction by farmers to the changing situation is likely to depend on their individual land and family circumstances rather than the system of farming being pursued.

Where businesses are under pressure, farmers wishing to remain on their holding will be looking for ways of maintaining viability. If an afforestation package can be demonstrated to provide this opportunity then it may be attractive.

In summary the major opportunities offered by the strategy are as follows.

Forestry

- Providing guaranteed income for 15 years, through grants.

Farm diversification

- Providing a wooded setting within which to diversify.
- Making use of the particular/exceptional opportunities provided by sport, recreation and tourism in the Forest.
- Providing and managing public access and recreation facilities.
- Development of farm tourism in the longer term.

Open land

- Creating new areas of open land (heathland, meadowland and wetlands) through schemes such as Countryside Stewardship and the constructive use of set-aside.

Conservation

- A chance to broaden farm business into conservation through the use of Countryside Stewardship and other grant-aided schemes.

Sporting use

- Providing income from shooting in new woodlands.

In considering their options, primary concerns of farmers will be as follows.

Land values

Capital assets are tied up in land for the majority of owner–occupiers. A major concern of farmers and landowners is that afforestation would drastically reduce land values [32].

In terms of built development and minerals extraction there are areas where land values could be raised beyond the means of a potential planter by the 'hope value' of landowners obtaining future planning permissions. This particularly applies close to motorway intersections, along the corridors of major trunk roads, around urban fringes and in areas of mineral prospecting. Hope value could easily sterilise such land if new planting is seen to preclude its development at a later date.

Farm profitability

Farm profitability data indicate that incomes are falling on all of the farm types within the Forest area [32]. This reflects a national pattern, where incomes in real terms are now only 37 per cent of their 1975 value. The worst affected sectors have been beef and sheep and cropping farms but dairy farms, which had been relatively profitable, have also seen a sharp decline in the past two years. Added to this are the current trends in agriculture and the GATT and CAP reforms — designed to reduce agricultural support — which could result in profitability falling further on the majority of farms.

However, forestry is not the automatic successor to land going out of production or finding its way onto the market. Traditionally afforestation has not been seen to offer opportunities to farm businesses under pressure, but rather as a long-term investment by prosperous businesses. Landowners also feel that putting significant amounts of land into forestry would affect the viability of the farm business, particularly on smaller farms [33]. The ability to integrate forestry in a profitable way that sustains farm incomes and retains the viability of individual holdings will be a major factor determining the successful uptake of planting options by private landowners.

GATT and CAP reform

Uncertainty arising out of the prolonged negotiations on GATT and CAP reforms is affecting farmers' ability or willingness to undertake long-term land use changes on their holdings. The eventual outcome will significantly affect their willingness to plant.

The present set-aside proposals include regulations for an annual set-aside scheme, which would exclude tree planting as part of the 15 per cent set-aside commitment. Detailed proposals are still awaited for the non-rotational scheme but unless tree planting can be included on such land, the reforms could strongly militate against the planting of farmland.

It is crucial in the continuing negotiations on set-aside and long-term agri-environmental measures that they are drawn up to be conducive to long-term alternative land uses and thereby encourage afforestation on farms.

Farmers' attitudes

There has been a lack of interest in new woodland planting among farmers and private landowners in the Forest area. Fewer than ten hectares per year has been undertaken over the past ten years [33]. Farmers are used to growing annual crops rather than tying up land for many years in woodland and they are aware that they lack woodland skills [32]. A lack of knowledge of timber use and markets exacerbates these concerns. A change in approach would be required in order to become a farmer–forester. Likewise, attitudes to public access and dealing directly with the public are likely to influence strongly land use and business decisions.

Land tenure

At 41 per cent there is a higher than average amount of tenanted land in the Forest. In the short term, this may be a limiting factor against new planting in certain parts of the Forest. Although a tenant is not precluded from participating in the various tree planting grant schemes, there must be agreement between landlord and tenant. Traditionally, farm and estate woodlands have been considered the landlord's province.

Another area of uncertainty in a tenant's mind is that generated by a fear of forest-related development, for which the landowner may gain planning permission and thereby be in a position to serve a notice to quit upon the tenant on the land in question.

Farm diversification and rural enterprise

There has been a marked interest country-wide in farm diversification over the past three years as the primary role of agriculture has declined.

The Forest would provide a unique opportunity to establish an attractive wooded setting that could enhance the potential for farmers to diversify. Particular opportunities could be presented through the development of sport, recreation and tourism. Private landowners and the Forest could gain mutual support from one another — the Forest providing a means to generate new income for farm businesses, by growing timber and attracting visitors, and farmers by planting trees and developing facilities to service visitors.

The main opportunities for farm diversification and rural enterprise would be as follows.

Farm tourism

The greatest opportunities would lie in fulfilling known gaps in the accommodation market for staying visitors and for servicing the network of trails, walks and outdoor recreation sites that would provide public access. Farms strategically placed adjacent to these facilities could benefit from both types of opportunity.

Serviced and self-catering farm-based accommodation is at a low level across the area and there is potential for providing bed and breakfast facilities and caravan and camping sites. There is also scope for developing redundant outbuildings and barns into hostel-type accommodation, as pioneered by the Peak District National Park. Guidance is available from the Countryside Commission [34].

The potential scale and high profile of the proposed trails and access areas would create opportunities for many commercial services, apart from accommodation, such as stabling, cycle hire, catering facilities and retailing. These networks of services would be as important as the trails themselves.

Leisure

In addition to the opportunities for sport, recreation and tourism development discussed in Chapter 4, there are a variety of other farm-based opportunities. Angling is presently one of the most popular forms of diversification in the area. Well-designed angling lakes could provide interest for both fishermen and visitors, as well as enhancing landscape and wildlife interest. Other activities benefiting from a wooded setting include clay pigeon shooting, golf, provision of picnic sites, farm/woodland walks and the development of farm parks.

There is also potential for farmers and landowners to develop permissive riding routes on their land. Possibilities include circular routes, with optional jumps, courses on individual estates and networks of 'toll rides' crossing a number of landholdings. The latter involves riders purchasing an arm band to enable them to ride on certain designated routes. Surveys have found that more than 40 per cent of riders would be prepared to pay over £20 per year for off-road riding; many were prepared to pay over £50 and some even £100 [29]. Other opportunities include the development of equestrian centres.

Catering and retail

The current number and range of enterprises across the area is small and as the forest matures and attracts more people this would be a definite potential growth area. Tea rooms, restaurants, pick-your-own, farm shops and speciality food outlets could all be developed by farm businesses. On a larger scale the Forest would offer opportunities to establish tree and wildflower nurseries to supply forest trees and plants and it could also stimulate local demand for garden centres.

Forest industries

The Forest strategy could generate new rural industries based upon timber and wood products. These would include opportunities for timber processing, with the development of local sawmills, the manufacture of timber products for the Forest, woodland craft industries and furniture manufacture. There would also be related markets for items such as charcoal, garden mulch, wood chips and fuel wood.

The development of short-rotation coppice as a source of fuel wood could be particularly significant as national trends and technology move towards increased use of renewable energy sources for both industrial and domestic use. As a form of diversification it allows farmers to move steadily from growing annual crops to a 3–5 year coppice rotation, which may also nurture an interest in longer term farm forestry. Wood chips, when composted with straw and nitrogen, also have market potential as a peat substitute and both charcoal and garden mulch have increasing potential with urban markets.

A number of factors could hamper or delay the development of diversification and rural enterprise initiatives.

Woodland cover

Most of the opportunities lend themselves to the medium to long term when the Forest would be starting to mature. In the short term (up to ten years) opportunities may be restricted and at worst the appearance of new plantings could have a negative effect on some diversification enterprises, unless they could be promoted as being of interest in their own right.

Farming types

Diversification has principally proved successful for those farms with a strong farm business. Diversification is unlikely to be a lifeline to survival for weak farm businesses. The most successful have had the advantage of capital, marketable farm assets and personal skills. The scope for diversification, therefore, would not be universal across the Forest.

Farming pattern

The relatively large amount of tenanted land may mitigate against diversification in certain areas.

Skills

There would be a considerable need for farming families to learn new skills if they are to make the most of opportunities.

Perceptions of visitors

Some landowners would be reluctant to encourage visitors on to their land due to perceived problems of visitor management, increased insurance risks, litter management, car parking requirements and vandalism. Attitudes have hardened as a result of the invasion of private land by so called New Age travellers. Misgivings about a great increase in the number of visitors are also likely to be shared by others resident or working in the locality.

THE STRATEGY FOR AGRICULTURE AND RURAL ENTERPRISE

The strategy approach

The retention and development of a viable agriculture as a key land use is central to the fulfilment of the overall vision for the National Forest.

Far from superseding agriculture, or putting farmers out of business, the Forest would provide an opportunity to broaden the base of agricultural businesses at a time of falling farm incomes and uncertainty throughout the sector as a whole.

Participation by farmers and landowners in the development of the Forest would be entirely voluntary. Efforts to encourage their participation would need to be economically sensible and complementary to their land management ambitions.

Recognition should be given to the major change in business structure, perceptions and way of life that is being sought from those who undertake to become farmer/forester/recreation manager, and every practical assistance given.

Retaining a healthy, viable agriculture is part of the Forest vision.

Farm diversification

Successful farm diversification would stem from farmers' and landowners' active involvement in planning for leisure and tourism in the Forest. New woodland planting would provide an economic return in its own right but would also provide the setting for income-generating leisure and tourism initiatives. It would be vital therefore that the two were planned together to mutually reinforce one another and enable the maximum benefits to be gained. Although most opportunities would arise in the medium to long term as the Forest matures, there are many initiatives that require development and could generate economic returns in the first few years.

Trails and paths

Of prime importance would be the network of trails and paths, which landowners would be instrumental in helping to identify and develop in partnership with other organisations. These would form the backbone to leisure infrastructure in the Forest and would be economically critical for landowners in that many benefits could follow from servicing them. There would also be potential for income generation through certain trails themselves, in particular by making use of the Community Woodland Supplement to allow public access to woodlands and through the development of toll routes for horseriders and cyclists.

The Forest offers tremendous potential for farm tourism.

Countryside Commission

To accompany this early development of the trail network would be complementary services that cater for them. Early initiatives could include the development of cycle hire and horse stabling facilities. In the medium term, catering and retailing outlets, which could be linked to farmhouse accommodation, could be developed. There would also be a role for landowners in interpreting forest trails for visitors and educational use.

Open land

Open land is currently minimal in extent. This is partly due to the intensive way that most farmland is managed. Only small remnants of heathland and common land remain. To accommodate more open land new areas would need to be created. Some of the best opportunities would be on current agricultural land and could include the creation of heathland and meadowland and reinstating traditional river valley and historic parkland landscapes. Such sites would be managed for nature conservation and informal recreation. Management and creation of open land could be targeted through schemes such as Countryside Stewardship and the constructive use of set-aside.

Farm tourism

Significant potential lies in developing farm-based accommodation to link with the trails network. Early requirements would be to provide new camping and caravan sites and additional bed-and-breakfast opportunities. Camping and caravan sites would need to be of a high standard and well landscaped. Specialist advice could be sought from organisations such as the Caravan Club, who could also help with coordinated marketing.

In the longer term, the concept of walking and cycling breaks could be developed, ie going from one accommodation establishment to another. These are extremely successful in Germany and Holland where accommodation is pre-booked and luggage is carried forward to the next accommodation point. Programmes are put together by local authorities or groups of accommodation establishments working together.

Leisure developments

Commercial leisure development opportunities could be sought by farmers and landowners either as individuals or as cooperative ventures. In the short term, there are major gaps in the provision of open water areas for angling and leisure activities such as windsurfing. For angling the idea of providing a fisherman's rover ticket for access to several new waters could be developed. There is also the possibility of meeting the demand for golf with the provision of more pay-as-you-play and novice courses. Farm parks and the development of visits to working farms could also be promoted as individual attractions for visitors and schools.

In the short to medium term, equestrian centres would have a wider role, offering livery, tuition and outriding. On a site-by-site basis, landowners could provide for clay pigeon shooting, orienteering, paintball and picnic sites, all of which can benefit from a wooded setting.

Catering and retail

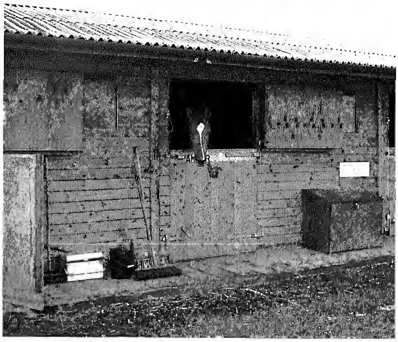
These are most likely to reach full potential in the medium to long term. In the short term there would be limited opportunities for individual landowners who would be located adjacent to the developing trails network and in areas where there is a developing leisure, tourism or recreation focus.

Diversification across the Forest

The most likely areas where diversification could be undertaken on a large scale are those of high owner–occupation in the Mease Lowlands and the rural parts of the Coalfield. Elsewhere, owner–occupied holdings are intermixed with tenanted land. Large concentrations of tenanted land are found in Needwood, the Calke Uplands and Trent Valley. In addition, in Charnwood, 30 per cent of the land is in part-time farming. In these areas diversification may be more restricted, as experience has shown that these farming patterns are not as conducive to the establishment of new enterprises [3]. In the case of tenanted land much will depend upon the tenant/landlord relationship and any agreements that can be made.

Forest industries

These would be related more to the long-term development of the Forest. However, it is important that thought be given to the siting of various industries right from the outset. Sawmills and timber-related industries would need to be sited adjacent to major transport routes, allowing both ease of access to timber on site and accessibility to local urban or national markets. The A38 and/or M42/A42 are particularly well sited to serve both needs.



The Forest would provide an ideal setting for farm diversification.

Other industries

These would need to be sited close to urban centres where there is a market for garden centre goods, charcoal or garden mulch. Tree and wildflower nurseries serving the Forest would be suited to a rural setting that offered good accessibility throughout the Forest, for example within easy access of the A50. Other activities such as woodland craft enterprises or furniture manufacture could benefit from being close to some of the Forest's tourism or leisure foci, to which large numbers of visitors would be attracted. There would be a need to examine diverse ways of developing forest industries and to learn from successful initiatives established elsewhere.

A living, working forest would help stimulate rural enterprise and create new jobs.

Forest life picture library

Information and advice

Farmers would continue to turn to their representative organisations, the MAFF and other advisers for matters relating to their core farming businesses. Nonetheless, there may need to be a channel for information on matters relating to the National Forest itself and the wide range of incentives and support mechanisms that would enable farmers to contribute.

The Development Team has provided general and on-farm advice relating to the range of grants and assistance available. Such a service could be continued. Its provision would need to be carried out in close cooperation with all of the relevant public and private sector advisers already in the field.

New skills

There would be a considerable need for farming families to learn new skills if they were to make the most of opportunities. Groupings of families seeking support for both enterprise creation and training would be likely to receive more support than would individuals. Available training programmes should be channelled, and if necessary, instigated where none exist.

Marketing

Cooperative marketing of farm and woodland products would be advantageous. Small-scale planting, in particular, can present considerable difficulties for marketing by individual owners. These problems often lead to on-going management of farm woodland becoming unviable, resulting in neglected woods and loss of confidence in timber as a long-term crop.

Diversification potential would also be enhanced if individuals can perceive their neighbours as being complementary rather than competitors. Developing a strong cooperative approach to marketing through the establishment of farm holiday groups, farm food groups and farm attraction groups would give diversified enterprises added strength as the image and identity of the Forest developed.

Perception of visitors

There would be a need to allay landowners' fears regarding public access and the management of large numbers of visitors in the countryside. The development of countryside recreation and access groups to form partnerships between landowners, user groups, local authorities and rural agencies would do much to improve communication and to address local problems and opportunities. This would need to be supported by the development of well-resourced ranger services and countryside management projects.

Introduction

The National Forest area has a rich ecological and historic heritage, with a mix of special and more workaday features woven throughout the landscape. Special features are reflected in the wide variety of sites designated as Sites of Special Scientific Interest (SSSIs), Nature Reserves, Regionally Important Geological Sites (RIGS), Scheduled Ancient Monuments and Parklands of Special Historic Interest. Equally important at a local level is a diverse range of features that are the results of the working of the land over centuries, such as historic field enclosures and remnant unimproved meadows. These make an important contribution to the overall ecological and historic character of the area.

Although dealt with individually in this Chapter, nature conservation and the historic heritage are in reality often linked. Ecological sites invariably have historic significance as remnants and surviving records of more extensive habitats. In turn, historic sites often have ecological value by virtue of remaining undisturbed, or, as is the case of many derelict mining sites, by forming niches where habitats have naturally regenerated.

The development of the National Forest would both enhance ecological character and add its own layer of history to the area.

NATURE CONSERVATION

Overall potential

The strategy would create a new functional, working landscape that would provide unprecedented opportunities to create and enhance an extensive and diverse range of wildlife habitats. Widespread benefits to nature conservation would result from the protection and better management of existing sites, the integration of extensive new forest planting and the creation of other habitats that reflect the area's ecological character. This provides the chance to redress significantly the losses of all habitat types that the area has faced due to improvements in agriculture, urban development, mineral extraction and, in places, inappropriate forestry.

Ecological benefits could be achieved through the location and design of new woodlands, sympathetic management of existing woodlands, the restoration of mineral workings and derelict land and through integration of new development, particularly in relation to recreation and leisure uses. There would also be instances where nature conservation would be the prime land use aim in its own right, for example, in the planting of new broadleaved woodlands and the creation of natural open land, such as heathland and meadowland.

Conservation and management

Retaining diversity

The existing ecological resource is very diverse and covers some nine per cent of the Forest area (see Chapter 1). This would form the starting point from which to develop future ecological interest in the Forest. Research indicates that certain open land habitats such as species-rich grasslands, heathlands and wetlands could be particularly vulnerable to forestry planting. The viability of many of these sites is often further compounded by their small size. Open land habitats cover around four per cent of the Forest area. The importance of such sites is highlighted by the fact that they are a rare commodity in lowland Britain [7].

Interlinking sites

The majority of ecological sites tend to be grouped in core, ecologically sensitive areas (see Chapter 3) with others appearing as isolated features within the wider agricultural landscape. However, even within the sensitive areas they are very fragmented. The Forest strategy provides the opportunity to extend nature conservation interest by interlinking isolated sites through new woodland planting, developing a network of wildlife corridors and through habitat creation.

Retaining ecological character

The identification and significance of ecologically sensitive areas also provides the chance for nature conservation to be given a natural focus within certain parts of the Forest. In these areas retaining ecological character by increasing the extent and range of natural habitat diversity would be a prime consideration.

Habitat management

Nature conservation could be given further impetus through sympathetic management of existing woodlands and the reinstatement of traditional management practices in other habitats.

On woodland sites the most important opportunities would arise through management and restructuring operations in ancient woodlands, especially those that have been replanted. Opportunities would also be presented on secondary woodland sites, particularly through management of neglected farm woodlands. However, on sites where nature conservation is not the prime aim of management, enhancement measures would need to be integrated in ways that do not restrict the commercial management and multiple use of most woodlands. Guidance is available on this [21].

On other habitats, research indicates that a lack of management or inappropriate management is resulting in the decline and loss of ecological interest on many sites [7]. Heathland is suffering from neglect and becoming invaded by bracken or secondary woodland and on other sites overgrazing has resulted in heather stands degrading into grassland. Wetland and grassland habitats are similarly in need of management. In many places there is evidence of hedgerow decline, with gappy, extensively trimmed hedges.

Visitor pressure

The development of increased recreation opportunities could help to relieve some of the existing visitor pressure on existing sites of high conservation value such as ancient woodlands and heath grassland sites in Charnwood. Greater access to new woodland areas would also help increase public awareness of the interrelationship between woodland management and nature conservation. On the other hand, careful management would be required to ensure that visitor use does not damage sensitive sites.

Habitat creation

New woodlands

The most extensive conservation gains would be achieved through planting of the Forest itself and by targeting this planting on arable farmland and improved grassland sites. Ecological interest and diversity could be increased further through the design of planting schemes. Apart from the trees themselves there would be the chance to integrate shrub planting and related woodland habitats into individual schemes.

Other habitats

Opportunities could include extensions to existing wildlife sites; mineral restoration and derelict land reclamation schemes; new habitats on farmland; landscaping schemes for planned new development; and the design of forest-related development proposals, especially leisure and tourism developments.

Economic constraints

The biggest threat to nature conservation interests would be tree planting on sites of important wildlife value, especially open land habitats such as unimproved grasslands, wetlands and heathlands. The economic differential between forestry and sites with low nature conservation interest, such as arable land, are high. Therefore the opportunity cost of planting is greater than on sites of high nature conservation interest, which tend to be marginal agricultural land. Initial planting schemes would be likely to gravitate towards marginal agricultural land. Unimproved grassland sites are particularly vulnerable as there are currently no financial incentives for landowners to manage them in ways that are sympathetic to nature conservation.

Landowners' attitudes

Nature conservation can be viewed by private landowners as a restriction imposed through designation. Within the Forest there would be a need to foster a positive, welcoming attitude towards nature conservation. This would involve promoting wildlife interest as being integral to the Forest's development.

THE STRATEGY FOR NATURE CONSERVATION

The strategy approach

Nature conservation sites would need to be safeguarded and ecological interest maximised through the design and sympathetic management of the Forest. This would embrace new woodland planting, management of existing sites of value and the creation of a diverse range of new habitats.

Conservation and management

Ecological sites

Recent draft DoE planning policy guidance on nature conservation recommends that nature conservation sites be identified and protected from development in statutory development plans.

Nature conservation should be recognised as having priority on ecologically sensitive sites. Forestry should be avoided on open land habitats, such as heathland, unimproved grassland and wetlands, and all sites should be subject to appropriate conservation management.

Significant areas of nature conservation importance are SSSIs and county level ecological sites. Taken together these represent the area's most important ecological sites and are prime examples of the natural ecological character of the area. They cover just over three per cent of the Forest's proposed land area.

Appropriate advice must be sought from English Nature for all SSSIs, while county wildlife trusts or county museums services can advise on the production of management plans for county level sites.

Context of ecological sites

There would also be a need to identify and conserve areas of sensitivity within the immediate vicinity of SSSIs and certain county level sites. For example, planting could have the effect of shading heath or grassland habitats. Equally, through incremental planting over time, the historic setting of features such as ancient woodlands, with their irregular boundaries marked by woodbanks and ditches of archaeological significance, could be enclosed and obscured by new woodlands. It would be equally important to avoid planting potentially invasive tree species in the vicinity of heathland and grassland sites in order to prevent unwanted natural regeneration.

For this to succeed, a positive appropriate use for the land that forms the context would need to be secured by means of a management agreement.

Other sites

Sites of district and parish level interest include some ancient woodlands, as well as important remnant grassland and wetland sites. They cover around six per cent of the Forest area. Such sites should normally be conserved through integration with new planting or other habitat creation. For example, small fields of herb-rich grassland could be integrated within woodland rides and glades; and species-rich hedgerows could form edges to forest rides; it may prove possible to extend an existing habitat, which would help to maintain the viability of many small sites.

There may also be instances where new woodland planting could prove of greater long-term ecological benefit than retaining an existing second tier site. Consideration would need to be given on an individual basis by county council ecologists as part of the consultation process on a forestry grant application.

Advice on appropriate management of such sites may be sought from county wildlife trusts or county museum services.

Management agreements and incentives

To secure the long-term future of nature conservation sites, management agreements could be developed under Section 37 of the Wildlife and Countryside Act 1981 or through mechanisms such as the Wildlife Enhancement Scheme, Reserves Enhancement Scheme, Countryside Stewardship scheme and Lowland Heath Grant scheme.

The Wildlife Enhancement Scheme is currently being run on a pilot basis until 1995 for SSSIs in two different areas of the country. In view of the national focus the Forest could bring to nature conservation issues and the need to encourage sympathetic management of SSSIs, it will be suggested that planned further pilot areas for the scheme should include the National Forest area. The Reserves Enhancement Scheme is similarly being nationally piloted in a number of counties, including Leicestershire in the Forest area. This provides grants to county wildlife trusts for the management of SSSI nature reserves and would have a valuable role to play throughout the Forest area.

The Countryside Stewardship scheme is directly applicable in targeting incentives to manage landscapes such as heathlands, wetlands and historic parklands. This scheme does not, however, include neutral grasslands. It is therefore recommended that a neutral grassland category be added to the scheme. This should target incentives for management throughout the Forest area. English Nature's Lowland Heath Grant scheme offers grants to organisations developing heathland managment initiatives.

Ecologically Sensitive Areas

Important agglomerations of nature conservation sites are clearly distinguishable in the Forest area, focusing upon river valley and upland landscapes, concentrations of woodland and heath and early field enclosures (see Map 4). These areas have strong ecological character and in the most unspoilt places they have an undisturbed, natural appeal that is now rare in the Forest because of the dominance of intensive land management practices. Such areas are a natural focus as areas where nature conservation could have a high priority.

While there is undoubted scope for some planting in each area, emphasis could also be given to conserving ecological character through managing habitats and identifying opportunities for habitat creation. Research has recommended [7] that area-based management plans would be an appropriate means of achieving a coordinated approach. Further consideration of area-based plans by a forum of nature conservation bodies is needed. Potentially, grant aid towards management may be available through English Nature's Wildlife Heritage Areas scheme.

Ancient woodlands

Ancient woodlands are an important ecological resource, as well as having historic significance and being prominent in the landscape. Nationally they are regarded as an irreplaceable asset which, once destroyed, can never be recreated [7].

All remaining ancient woodland sites would need to be conserved and managed to enhance their nature conservation interest. Management plans would be drawn up for all sites. These could be developed through the process of preparing a plan of operations under the Woodland Grant Scheme when a landowner applies for a forestry planting grant. Management approaches would depend upon whether the site is a semi-natural or replanted ancient woodland. Sites can be identified through English Nature's provisional inventories of ancient woodland [35, 36, 37].

On semi-natural sites natural regeneration would be encouraged in preference to replanting. Where planting is undertaken, stock derived from seed of local provenance would be used whenever possible. On replanted sites future felling of timber could allow non-indigenous trees to be replaced by original broadleaved trees and shrubs. Replanting of indigenous broadleaves would favour stock of local provenance, preferably through natural regeneration. If natural regeneration is inappropriate, there is the potential to undertake direct tree seeding using seed of local provenance in an attempt to create woodland stand types similar to those of semi-natural sites. Forestry Commission Special Management Grants could be used to provide financial incentives for ancient woodland conservation management.

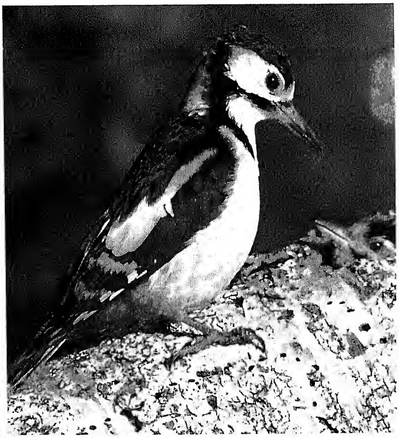
Woodland management

Sympathetic management of all woodlands would incorporate features that increase ecological diversity. Many existing woods have very few open areas in the form of glades, rides or streams. These can often be managed in a multi-purpose way. For example, wide, open, grassy rides edged with shrubs provide habitat for butterflies, improve pheasant-shooting potential and provide dry extraction routes for timber. As a general rule, up to 20 per cent of a woodland's area could be set aside as open habitat. This open land would still be eligible for the full rate of forestry grant based upon the total area of the site under the Woodland Grant Scheme.

Woodland edges are also important in providing a transitional habitat between woodland and the surrounding more open ground. Diverse edges offer most benefit to wildlife and these could be created through the planting and regeneration of native shrubs. An irregular shaped boundary would help to maximise the length of edge in relation to the size of the wood and to enhance the visual appearance.

Brooks, ponds, small lakes and seepage zones are also valuable habitats to retain. The value of retaining old, over-mature trees and decaying dead wood as a wildlife habitat for invertebrates and hole-nesting birds should not be overlooked. English Nature provides further advice on integrating all of these features [21]. In woodlands where nature conservation is a main management objective, English Nature's Land Management Grants could provide financial incentives.

Ancient woodlands should be managed to enhance their wildlife interest.



Forest life picture library

Conserving other habitats

Conservation and management of other habitats is influenced by differences in ecological character throughout the Forest. Priority should be given to:

- heathlands and acid grasslands in Charnwood and the Midland Coalfield;
- wetlands and wet grasslands in the Trent Valley and along watercourses;
- field ponds in the Mease Lowlands;
- species-rich grasslands in Needwood.

The Countryside Stewardship scheme, Hedgerow Incentive Scheme, Lowland Heath Grant scheme and Landscape Conservation Grants scheme would be particularly appropriate in targeting management incentives at heathland and wetland landscapes, hedgerows and smaller-scale features such as field ponds and meadows. English Nature's Land Management grant scheme could also be targeted at individual sites.

Wildlife corridors

There are many important linear features that could be managed to improve their conservation interest but also because they would form important wildlife corridors to link existing sites with new woodlands and habitats. These include the following.

- Hedgerows — through replanting gaps and allowing hedges to grow thicker (around 4 metres wide) and taller (above 1.5 metres high). Hedgerows could also be managed in conjunction with field margins to enhance ecological interest through the set-aside scheme.
- Roadside verges — by enhancing the floristic interest of grasslands and/or in appropriate places undertaking roadside tree planting.
- Derelict railway lines — by encouraging a range of habitats including grassland and, where appropriate, scrub and regenerated woodland.
- Watercourses — by encouraging a range of open water, wetland and wet grassland habitats.
- Forest trails and rights of way, which may be edged by grassland, hedgerows and woodland edges.

Earth sciences

Geological SSSIs and RIGS are features of the landscape of particular significance to the study of earth sciences. All represent unique features of the landscape that are worthy of conservation. As a matter of urgent attention, particular features of RIGS that could otherwise be masked by new planting would need to be identified.

Creating new woodlands

The planting of all new woodlands should embody principles that would enhance ecological interest by the way in which they are sited, designed and established. For example, new woodlands should, where possible, be sited close to ancient woodlands or species-rich hedgerows to encourage the development of a diverse woodland ground flora. Advantage should also be taken of the Woodland Grant Scheme provisions to include up to 20 per cent of a woodland's area as open glades, rides, tracks or brooks and to include shrubs within the species mix. Where possible, existing hedgerows should be used to form woodland boundaries.

In establishing woodlands, natural regeneration should be encouraged alongside replanting. Natural regeneration should be preferred on sites adjacent to semi-natural ancient woodlands. It is also suited to derelict land sites and, where appropriate, should be incorporated within restoration schemes.

Detailed advice and good practice on creating new woodlands to maximise nature conservation interest has been produced by English Nature [21].

Creating other habitats

Opportunities to create new habitats would be taken through:

- the restoration of mineral workings to which planning conditions could be attached,
- the reclamation of derelict land,
- the landscaping of new leisure and recreation facilities,
- the re-creation of landscapes,
- landscaping proposals associated with planned future development.

The main habitats appropriate for re-creation are heathlands, wetlands and neutral grasslands. Certain of these habitats, such as heathlands, can only be created where the geological conditions are suitable.

Heathland creation would be encouraged in Charnwood and the Midland Coalfield. In these areas some of the best opportunities would be associated with the restoration of mineral workings and the re-use of derelict land. Recreation of heath on open farmland would also be possible in these areas. English Nature provides specialist advice [38].

Wetland habitat creation has a natural focus in the Trent Valley. Where the restoration of sand and gravel workings and management of wet grasslands through the Countryside Stewardship scheme could result in a chain of large lakes and associated habitats such as reedbed, marshland and watermeadows. In creating areas of open water there would be potential to zone areas for leisure, recreation and nature conservation uses. From a conservation viewpoint new wetlands would be particularly valuable for birds and should be designed to create a range of appropriate habitats. Specialist advice from the Royal Society for the Protection of Birds should be followed [39].

Wetlands also have wider applicability, with the re-creation of wet grassland and waterside habitats along watercourses and the creation of open water areas that may be linked to recreation and leisure uses. Nature conservation could be integrated alongside uses such as angling and non-motorised sports through zoning of water space and the incorporation of water's edge features such as reedbeds and islands for wildfowl. Opportunities could be presented through mineral restoration and derelict land reclamation schemes in the Midland Coalfield or through conversion of agricultural land on a site-specific basis throughout the Forest area.

Developing neutral grassland could be undertaken in a wide range of circumstances, including:

- species-rich swards incorporated in development landscaping proposals;
- the restoration of historic parkland landscapes through Countryside Stewardship;
- as elements in leisure and recreation developments;
- through the development of conservation headlands along agricultural field margins [40];

Managing and extending remnant heathlands would be a priority in Charnwood and the Midland Coalfield.

- as extensions to existing sites of interest on land currently in agricultural use.

There would also be instances where several types of habitat creation would be feasible on one site. On golf courses, for example, it has been demonstrated that even within a relatively small area habitats such as rough grassland, scrub, individual trees, woodland, hedges, lakes, streams, ponds and ditches can all be incorporated [41].

The Forest and birds

The Royal Society for the Protection of Birds (RSPB) recognises that the Forest mosaic of woodland, natural habitats and farmland offers quite unprecedented opportunities to enhance the status of a number of nationally rare 'red data book' [42], bird species. Currently the Forest has limited numbers of several 'listed' species plus a further 20 'candidate' species. Over time the Forest would also have potential to attract other nationally rare species such as goshawk and red kite. The development of the Forest should recognise its potential for bird conservation by creating a diverse range of habitats, which particularly encourage those 'listed' and 'candidate' species listed in Appendix 5.

In addition the Forest could initiate a bird box campaign in young woodlands. This would maximise ecological benefits for common woodland birds by providing early nesting sites.

Urban nature conservation

Opportunities for creating wildlife habitats in urban areas should not be overlooked. This could include community wildlife sites, conservation projects with schools and sympathetic management of churchyards and areas of public open space. English Nature's community action for wildlife, schools grants and living churchyard schemes, and the jointly run Rural Action scheme, could be targeted towards these projects.

Whether in town or country, wherever possible new habitats should be created on sites adjoining existing semi-natural habitat, so that species can naturally spread into the new area. All new habitats should only be made on habitat that is currently artificial. English Nature provides further advice [21].

Other considerations

Species selection

In planting schemes where nature conservation is the main objective, English Nature [7] recommends that the tree and shrub species listed in Appendix 4 should be used. The use of these species should be particularly applied to Ecologically Sensitive Areas.

Local provenance

The use of trees grown from seed of local provenance would be of most ecological benefit when used in woodland nature conservation schemes. However, there are currently no tree nurseries within the Forest area that specialise in collecting and growing on seed for this purpose. Use of local provenance would be encouraged in conservation schemes and tree nurseries would be encouraged to provide appropriate plants.

Research is necessary to assess whether trees grown from local seed are suitable to use in forestry production. The Forest Enterprise would be well placed to explore this in any demonstration woodland projects it establishes in the area. The Department of the Environment might also assist in this through its research responsibilities.

Ecological surveys

Research [7] has highlighted that additional survey work is required in Staffordshire and Derbyshire, particularly in river valleys, woodlands, uplands and parklands. This would enable comparative evaluations to be made between the three Forest counties. Specialist organisations such as English Nature, the biological records centres in county museums services and county conservation trusts would be best placed to take a lead with this.

Ecological advice

Much detailed advice on good practice in relation to nature conservation and forestry is already available [19, 20, 21, 43, 44]. Consideration of how ecological advice can be disseminated would need to be given urgent attention.

HISTORIC HERITAGE

Introduction

The Forest area is rich in both archaeological remains and historical tradition. Man's use of the land and its resources is apparent throughout the landscape. This is reflected in many scheduled archaeological sites plus many more workaday features of local significance. This varied historic heritage reflects the agricultural and industrial history of the area and, in Needwood and Charnwood, their former ancient forest status. It provides strong links with the area's past and contributes much to the identity and local distinctiveness of different places within it.

Opportunities

There would be particular opportunities to improve the setting of historic and archaeological sites through new forestry planting, and to encourage their wider appreciation through interpretation, information and the provision of greater access. The historic heritage would add greatly to the visitor appeal and enjoyment of the Forest. Historic sites would also provide opportunities to add to the open land element within the Forest.

The known historic and archaeological interest is, however, quite limited and it would be important to identify areas of potential interest at the earliest opportunity to ensure that new planting or forest developments do not inadvertently damage or destroy sites.

The strategy approach

It would be essential to respect the overall historic heritage and safeguard the most important sites, as identified by English Heritage and County Council sites and Monuments records, from Forest planting or developments. In principle development of the Forest should add to, rather than detract from, the area's historic sense of place.

Applications for development or mineral extraction would be determined, as now, through the statutory planning process. These would be judged against government planning policy guidance [45]. Woodland planting schemes would be subject to the normal consultation arrangements, which operate when an owner seeks grant aid through the Forestry Commission's Woodland Grant scheme. This process would identify sites of known historical significance for protection within planting schemes proposals. New planting schemes should be designed to enhance the setting of historical sites. Where planting was around an important site it may be appropriate to determine a buffer zone, the width being dependent upon the nature of the site.

To ensure the full protection of the historic heritage, additional survey work to identify further areas of potential interest is probably required. The Royal Commission on Historic Monuments in England is undertaking an extensive first phase survey in 1993. Future field surveys would be required to follow this up. Future surveys should also include the preparation of a register of landscapes of historic importance — a new non-statutory duty that government has invited English Heritage to undertake.

Public awareness of the value of our historic and industrial heritage is high. Interpretation of sites should have priority as a means of explaining the history of the Forest area. Interpretation could be particularly explored for sites on farms, where there may be potential as part of a farm diversification scheme.

Wychnar deserted medieval village and site of manor house.

Overall potential

The National Forest is intended as a dynamic proposition, and a positive force for regeneration that could bring with it new forms of economic activity, jobs and wealth.

The intention is to change the physical character of the area and alter the way in which it is used. This would in itself bring new pressures for development that would require careful consideration. The Forest could help to attract new business activity and the number of people wanting to live in the area may increase. Proposals for new leisure and tourist facilities that make use of the Forest as a resource would also follow. These could bring substantial benefits to the area — new jobs, a more diverse economy, visitor spending and better facilities for local people. On the other hand, it would be important that development did not detract from the environment that the strategy creates.

The control of development that did take place within the Forest area would be, as it is now, a matter for the local authorities to determine through the statutory planning system, but there is agreement among the local authorities that a robust and imaginative approach should be adopted. They would seek to ensure that commercial return from new activity would help to support the forest development. This would help justify investment in woodland planting.

Present development commitment

There are 350 hectares of land allocated for industrial development in the Forest, principally at Coalville and along the M42 and A38 corridors; and 450 hectares scheduled for residential development. In the longer term there is the possibility of spin-off developments associated with Toyota at Burnaston, notably along the A38 corridor. Development would also be likely to increase significantly for forest-related activities, particularly those associated with recreation and tourism. A more detailed analysis of current development activity is given in Appendix 6.

The Forest area is not prosperous and the local authorities are keen to encourage incoming investment. A relatively low percentage of the 71,000 workforce is employed in the service sector (58 per cent compared to the 69 per cent national average), with manufacturing still accounting for 35.5 per cent.

The Forest would help to stimulate economic activity.

The effect of the Forest

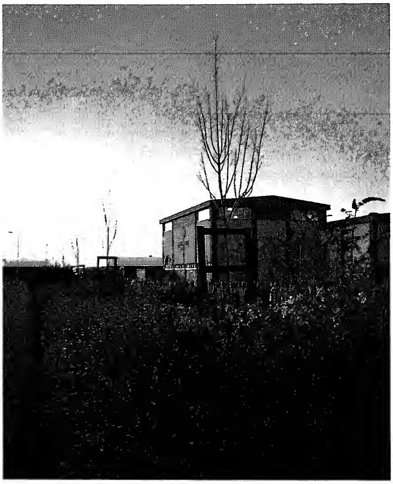
Certain types of development would help to fulfill the Forest's objectives: the main foreseeable forest-related developments of this kind are likely to be:

- tourism, recreation and leisure facilities;
- derelict land restoration to woodland, public open space, leisure use and/or created wildlife habitat;
- farm diversification involving land, redundant buildings and, in some cases, new development;
- rural enterprises including visitor attractions, forest enterprises (timber processing, woodland products, manufacturing, craft industries) and tree and wildflower nurseries;
- commercial businesses and industry attracted by the improved quality of the surroundings;
- increased demand for Forest residences.

The contribution by development

All forms of development offer possibilities for contributing towards forest planting. For normal development, ie housing and employment uses allocated in development plans, this would entail high-quality landscaping commensurate with the scale of the development. For forest-related development, this would either entail substantial on-site or off-site planting or a developer contribution by means of a planning agreement. However, in practice there are a number of constraints that make any simple equation difficult to achieve.

Planning legislation: The Planning and Compensation Act 1991 and related DoE guidance state that any planning obligations should be related to the development itself. In this respect it would be important for local authorities and developers alike to recognise the special, national nature of the Forest project and what it seeks to achieve. Nevertheless, demands by local authorities must be demonstrably reasonable and negotiation would need to be carried out on a site by site basis. However, for planning



New development should contribute towards planting.

obligations to play a full part in the Forest's creation, it would require a constructive application of the criteria for using them. Guidelines to help developers would be very useful.

Ownership: Where a developer did not own or control land needed for planting they might be forced to pay much higher prices to secure it. If the price was too high it could jeopardise the development taking place. Values of local farmland could be forced up if it was known that a site was required as part of a planning agreement. The additional administrative burden of having to acquire additional land could also be significant.

Physical constraints: Many development sites are bounded by roads or other features, or are pockets within urban areas. Scope for directly related planting would be constrained.

Existing planning consents: Up to half of the development sites in the area already have planning consent for development, most others are already published in local plans. Planting conditions cannot be applied retrospectively. Existing allocations represent around ten years supply of development land. Although it is unlikely that all of this would be developed during that time, and some new sites would be allocated, it does mean that higher levels of landscaping and tree planting with development would take time to emerge.

Hope value and future development: Developers and landowners may find it difficult to plant where they feel that it would constrain future growth of a site. An understanding of where trees are to be planted and where future development could take place would be required.

THE STRATEGY FOR DEVELOPMENT

The strategy approach

Development and the planning system that controls it would have a vital part to play in the realisation of the National Forest.

However, development could not and should not take the lead role in creating the Forest. Planning policy and development control would continue to be the responsibility of the local authorities through prevailing planning legislation. As elsewhere in the country development would be plan-led. The planning process also allows for consultation and public participation.

Development in the Forest would not become acceptable merely because the proposer expresses a willingness to plant trees. The local development plans, with due regard to the Forest strategy, would identify those parts of the Forest where development would be acceptable, the form that development could take and, most importantly, the contribution that development would be expected to make to the furtherance of the Forest strategy.

Planning policies

Local authorities have expressed the intention of taking a robust and imaginative approach to development and to ensure that commercial return from new activity would be used to support the realisation of the Forest.

Regional planning guidance and structure and local plans for the Forest area would also need to be not only supportive to the concept of the Forest but also contain statements and policies that are positively conducive to its achievement.

The National Forest administration would want to be consulted on all development plans and major planning applications covering the Forest area.

Development proposals, particularly those for forest-related development, should be considered in the light of the strategy as well as the local plan policies. A commitment to have due regard to the Forest strategy would be encouraged in all statutory plans for the area, at least in the explanatory memorandum or supportive text.

A consistent approach by all local authorities in the area would be sought in order to consolidate the concept of the Forest in the minds of developers and the general public.

A Planning Technical Working Group established during the development phase of the Forest has brought together planning officers from all of the local authorities and the East Midlands regional office of the DoE to agree a consistent set of policy measures for the Forest area. Some are general, but others are more specific and would be applicable according to local circumstances. It is the intention that the planning policy principles be written into regional planning policy guidance and structure and local plans as documents come up for review.

The rationale behind the planning policy principles is as follows.

- There should be a positive approach to new developments that enhance the use and enjoyment of the Forest and offer the opportunity for related planting.
- Planning conditions and obligations should not unduly burden development with additional cost but should endeavour to ensure that land use change, fulfilling the Forest objectives, flows from the development process.
- Account should be taken of the value of completed schemes and consideration given to the ability of landowners and developers to provide appropriate landscaping in different circumstances.
- Where appropriate, funding from grant regimes and incentives should be used for eligible schemes to alleviate the financial burden of planting.
- Landscaping requirements should not jeopardise the viability of the development itself.
- Generally there should be a presumption in favour of public access to planted areas in association with development unless other considerations dictate.
- Where feasible, guidance should be issued on the levels of planting or other environmental or social requirements that might be expected according to the size, type and value of proposed development. Design guidance would also be required on the integration of development within a forest setting.

The planning policy principles discussed and agreed within the Planning Technical Working Group are included in Appendix 7.

Management of woodlands and trees

The mechanisms for the long-term management of woodlands and trees planted in association with new development would be likely to vary depending upon the site and different circumstances. It is unlikely, however, that developers would be willing to take on the responsibilities of management beyond the early years of getting trees established. The options for long-term management could therefore include:

- the establishment of a trust or management company arrangement to manage land for community benefit;
- covenanting land to a charitable organisation such as the Woodland Trust.
- the local authority taking direct responsibility and, where appropriate, agreeing with the developer a commuted sum through a planning agreement;

Each planting agreement would need to make clear who would be responsible for the long-term management of woodlands and trees related to the development.

MINERALS: OPPORTUNITIES AND CONSTRAINTS

The mining and working of minerals has been a significant feature of large parts of the Forest area over a considerable time and is likely to remain a dominant land use in the long term. It is one of the reasons for the site of the Forest being chosen, as it presents a major future opportunity and a significant challenge to improve the landscape and encourage economic regeneration. The restoration of derelict land from past industrial and mineral activity particularly needs to be addressed. Mineral companies own or have control over roughly 11 per cent of the Forest area (5,500 hectares) of which 2,000 hectares is operational (see Map 9). Of several large companies, British Coal is the major landowner, having control over around five per cent of the area.

The Trent Valley is a national source of sand and gravel with more than 550 hectares of land with consent for extraction. Charnwood contains significant reserves of hard rock, with four large active quarries. In the central area deep-mined coal activity, once the mainstay of the local economy, has now ceased after the closure of 13 collieries and the loss of 10,000 jobs since the 1980s. However, clay workings and opencast coal extraction continue on a large scale, with more than 500 hectares of land currently being actively worked.

The level of past mineral activity has left the area a legacy of dereliction, with up to 500 hectares of statutory derelict land on 50 sites within the Forest. Much of this lies at the heart of the Forest in the Ashby Woulds area.

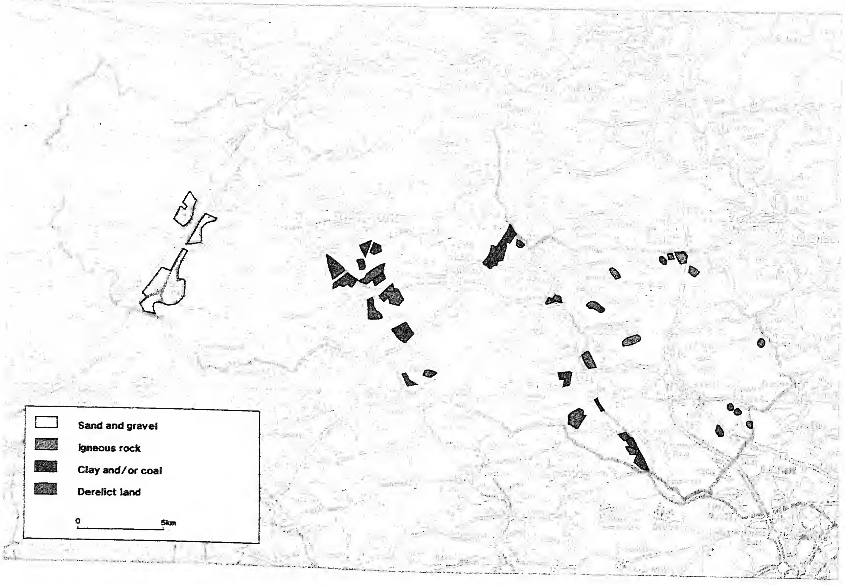
This level of dereliction, combined with on-going extraction, gives large parts of the area a blasted and desolate feel, and it is clearly in these areas that the Forest would have much to offer.

Details of existing minerals activity and derelict land are given in Appendix 8. In terms of scale, on-going minerals activity is more significant in land use terms than the restoration of derelict land, particularly as further extraction is seen as the key to restoring as much as 40 per cent of existing dereliction.

Derelict and mineral sites in themselves provide an important opportunity for woodland creation for a number of reasons.

- Minerals ownerships represent a significant land area and could potentially provide as much as six per cent of the planting target.
- Land use change is expected to take place in a short time scale and is controlled by planning policy.
- Restoration costs are relatively small compared to the total investment on the site.

Map 9. Minerals and derelict land.



The area is rich in mineral reserves.

- Restoration provisions provide the opportunity to create more imaginative end uses, particularly areas of woodland and open land, with a high degree of public access where appropriate. Restored sites could fulfil multiple objectives, including forestry, leisure, recreation, access and nature conservation.
- Tree planting is often a more cost-effective restoration method.
- Funding to restore derelict sites may be available through the Derelict Land Grant (DLG) programme.
- The minerals industry recognises the importance of landscaping and the potential loss of ecological resources and is pledged to take these into account in proposals.

It is estimated that current proposals for minerals activity (ie with planning permission or under way) are likely to result in as much as 1,300 hectares of land being restored and planted as forest by the year 2006. In addition, 200 hectares of derelict land could be restored through the DLG programme, providing a core of public access sites in the heart of the Forest.

However, minerals activity will not simply cease at a point in the future. Consideration has to be given to how to accommodate minerals activity over a long period and how to develop a long-term relationship between what can be complementary, but are at the same time essentially competing, land uses.

Minerals activity is a complex equation. It can have a significant impact on people in a local area and, because of this, proposals can generate significant local opposition. Market demand, energy policy, the interests of the landowner, after-use and transportation all have to be considered. In addition, negotiations can also include old consents and previous dereliction.

DERELICT LAND: OPPORTUNITIES AND CONSTRAINTS

There are approximately 500 hectares of statutory derelict land within the Forest, most caused through the coalmining industry (see Appendix 8). On-going minerals activity and new development will eventually restore about half of this area; the remaining 50 per cent may be eligible for funding under the DLG programme. As much as 350 hectares of land is potentially to be restored to forest or forest-related use.

DLG has already played an important role in restoring derelict sites to forest uses. However, the responsibilities of DLG functions have now been transferred to the new Urban Regeneration Agency. It would be important that funding for the purpose of derelict land reclamation continues to be available in the Forest area in some form or other.

It is possible to divide restoration of derelict sites from on-going mineral activity. The pace at which land is restored will, to a great extent, be determined by mineral operators (principally British Coal) who view restoration, and the release of sites for others to restore, as part of the on-going negotiation in respect of new minerals activity.

The Forest has a legacy of more than 500 hectares of derelict land.

THE STRATEGY FOR MINERALS AND DERELICT LAND

Minerals strategy

The local planning authorities determine policy through the framework of minerals local plans. Together with national guidance the local plans determine the level of activity in the area. Within the Forest boundary it would be appropriate for minerals and aggregates plans to reflect the Forest strategy in their proposals.

Within the National Forest any consent for mineral extraction would be guided by these established policies and would not be allowed merely because restoration to tree planting is proposed. Where consents were allowed they could, and should, play an important part in the creation of the Forest through statutory mechanisms and agreements. If mineral companies take a more enlightened approach to land utilisation, and see that the Forest proposal could continue to provide them with a long-term supply of raw materials in a more publicly acceptable manner, then much could be achieved.

Fear has been expressed that the Forest proposal could be seen as a means of obtaining planning consent through restoration promises. This must demonstrably not be the case. What would be needed is dialogue between mineral companies, local authorities, local communities and the National Forest administration.

A major recent initiative is the National Forest and British Coal Charter [46]. In this British Coal has taken a lead in giving its full backing to the National Forest and announcing its intention of returning mineral-worked land surplus to its requirements to forest-related use. British Coal will also consult the Forest administration on all mineral restoration proposals and see that sites are restored in accordance with the Forest strategy. Similar working agreements would be invaluable with other mineral operators.

Good progress is also being made towards long-term restoration strategies in the Ashby Woulds and Trent Valley areas by the local authorities and minerals companies, with a view to agreeing a strategy for restoration and extraction in these areas. This type of integrated restoration strategy, ie to consider wider areas, and whole ownerships, rather than individual planning consents, should be encouraged.

Restoration proposals and mineral local plan policies would need to reflect fully the Forest strategy and seek to further the strategy in all its objectives, including forestry, leisure, recreation and nature conservation.

Mineral companies would need to be encouraged to contribute far more than the current minimal requirements for landscaping and restoring worked sites. Attention to quality and achieving the highest standards of after-care would also be important.

Policies would seek to ensure that the primary restoration of mineral sites should, where practicable, be to public access woodland or forest-related activity. Financial or land-ownership constraints would not be sufficient cause to prevent afforestation after extraction, and mineral companies would need to take this into account in their negotiations. The market value of restored agricultural land is not significantly different from restored tree-planted land and it is, in many cases, a cheaper form of restoration. However, the landowner's requirements must continue to be respected in the event that the company itself is not the outright owner.

Derelict sites and former mineral workings may provide major opportunities for planting.

Screening of sites by tree planting, pre-planting and planting to compensate for the environmental impact of extraction could all be considered. Beyond this, mineral operators could start to look at their wider land holding and the wider environment in which they work. Consideration could be given to off-site planting, and to a programmed and agreed planting, extraction and restoration regime. This could include more imaginative restoration and land use proposals, such as creating new areas of nature conservation habitat alongside woodland planting.

To mitigate the environmental impact of extraction in accordance with government guidance, mineral companies could also consider planting areas other than that to be extracted elsewhere within the National Forest. Planting grants are available to support this and extensive landownerships are held by mineral companies in the area that could prove to be suitable locations. On tenanted land, agreement would need to be reached between landlord and tenant.

Where land is currently to be restored to agriculture rather than forestry under planning conditions, these conditions could be reconsidered and renegotiated by agreement wherever possible.

In principle, planning policies need not make impossible the removal of trees (except for ancient and other valued woodland) to facilitate future extraction. In the long term a forward-looking programme of planting, felling, extraction and replanting in areas of mineral interest could be envisaged subject to normal planning consents and agreements, rather than the Forest sterilising areas of potential mineral interest forever.

Proposals for landfill in the National Forest would need to be carefully considered. Recent research suggests that tree planting on landfill sites can be undertaken with appropriate ground preparation and aftercare [47].

Restoration of sites for commercial end-uses (eg watersports, recreation facilities), would be the subject of separate planning considerations and could provide for the creation of a substantial woodland setting as laid out in local plan policies. Depending upon the nature of the proposal, these may require a greater contribution to create an appropriate environment.

In discussions with landowners full regard should be given to minerals activity, providing the local infrastructure required not only to serve the extraction, but also subsequent public access to restored woodland and recreation areas.

Derelict land strategy

Derelict land could provide a key opportunity for creating the Forest. Extensive areas of dereliction scar much of the landscape. Their early planting would be a tremendous physical and psychological boost to the area, and would provide focal points for forest activity and access. There are more than 50 derelict sites, each of which could provide the opportunity for public access. Many could be imaginatively developed to provide areas of open land, recreation sites, picnic sites, sports areas, cycleways, wildlife areas of great diversity and provision for car parking.

The cooperation of British Coal and the continued application of the DLG programme are keys to achieving success in this area. It would be essential that the new Urban Regeneration Agency recognises the need to restore vast amounts of derelict land within the rural areas of the Forest.

This chapter describes the future vision of the Forest as it would be realised by the strategy. It does this by means of the six geographic zones (see Map 6) described in Chapter 2 and identified according to their regional character.

Needwood

This is a landscape of strong unity and historic character. The approach here would be to enhance subtly the existing landscape. Care would be needed to retain the landscape's particular qualities and features, notably its traditional pastoral character, patchworks of hedged fields, narrow lanes with high hedgebanks and distinctive red brick buildings. Vistas from valley tops and prominent features such as the Needwood scarp slope overlooking the Trent Valley should be maintained.

The result would be an intimate mix of forest planting and rural farmland, with new estate forestry, farm woodlands and shooting spinneys blending with ancient woodlands, hedgerow trees and replanted parklands. These elements would be interlinked by a strong pattern of hedgerows, with emphasis given to gapping-up and, in places, reinstating removed hedges. New forestry planting would be concentrated on unwooded farmland to form links between the existing wooded estates and historic parklands.

The pervading rural character, with its attractive rolling landscape and pleasant villages, provides an ideal setting for quiet, informal recreation. It would be an area for visitors to discover, with priority given to an extensive network of forest trails and paths. Farm diversification would be encouraged in association with the trails network, in particular providing accommodation, picnic areas and facilities such as stabling. Mature forest settings may also provide opportunities for discretely sited high-quality leisure developments.

Agriculture has an important role in retaining the traditional pastoral character of the landscape. Schemes such as Countryside Stewardship would be targeted to enhance nature conservation interest by reinstating river valley meadows, grazing pastures in historic parklands and areas of species-rich grasslands.

Trent Valley

The Trent Valley is a fragmented and active landscape resulting from widespread sand and gravel extraction, urban development and the presence of major transport routes. The area is envisaged as a prime visitor focus for a wide variety of formal recreation and leisure activities, many of which would be based upon open water. This reflects the valley's natural advantages, with the River Trent, the Trent and Mersey Canal and extensive potential for creating new areas of open water through the restoration of mineral workings. The transport network also offers exceptional accessibility to the area.

Substantial recreation and amenity planting associated with the creation of a Trent Water Park would be the key theme to unite the present open, fragmented appearance of the valley.

Forest planting would be varied and would reflect the mix of current and potential land uses. Robust, recreational planting would frame and enclose a network of large lakes and pools; amenity parkland would be a feature of the Burton riverfront; community woodlands would be sited on the urban fringe; and urban forestry would be a theme within settlements. Roadside planting should provide a high-quality approach along the main A38 gateway into the Forest. Substantial landscaping would also be needed to soften the appearance of roadside ribbon development and to provide a wooded setting for planned new development.

In the agricultural landscape farm woodlands and short rotation coppice would be interlinked with hedgerows and hedgerow trees. Poplar plantations may have a place on moister ground. Along the watercourses small-scale planting should aim to link riverine copses and groups of trees.

Within this wooded setting the present busy landscape could lend itself well to the development of site-specific formal sports and recreation activities, including noisy sports, and to providing widespread opportunities for informal public access. Individual sites could be linked by a network of riverside and canal trails and local circular walks. Trail links would also be made into Needwood and the Mease Lowlands. Visitor attractions could be developed in Burton upon Trent, with tourism interest focusing on beer.

Enhancement of the historic heritage and natural environment would also be important. The valley is the most significant area in the Forest for archaeological remains and interpretation of sites would add to the visitor appeal of the area. Wetland habitats would be a particular focus for nature conservation. This would include better management and reinstatement of wet grassland sites along watercourse corridors and the creation of open water and habitats such as marshlands, reedbeds and wet grassland associated with restored gravel workings.

Mease Lowlands

This is a large-scale, open agricultural landscape where tree cover has been significantly depleted by Dutch Elm disease. A substantial conversion of agricultural land into forestry would create a completely new, large-scale forested landscape. Forested land would be in balance with agricultural land, with new woodlands designed to enclose and blend with tracts of productive open farmland.

Large-scale planting would be required to complement the large-scale pattern of fields and would be likely to include commercial plantations, farm woodlands and areas of short rotation coppice. There are a number of estates where game coverts, shooting spinneys and agroforestry may feature. Reinstating parklands around country houses would also be encouraged. New forestry planting would be linked by existing hedgerows and, in places, newly-planted hedges and shelterbelts.

Around villages and along watercourses finer planting detail would be required to reflect the smaller scale landscape character. Amenity planting and small orchards should be a theme in the villages, with scattered waterside trees and copses encouraged in appropriate places along rivers and streams.

In the design of new planting it would be important to retain vistas so that characteristic features such as village church spires are framed rather than masked by planting. Vistas should also be retained from the low scarp that overlooks the Trent Valley.

At present, the area has a strong rural character and is relatively isolated. It is intended that it should remain a quiet, peaceful area to be discovered by visitors. Informal recreation based upon a network of forest trails would be an important visitor focus. A high number of owner–occupied landholdings also offers widespread potential for farm diversification enterprises. This could include facilities to service the trails network and the development of discrete site-specific leisure activities within attractive forested settings.

Ecological interest would be enhanced through the management and reinstatement of traditional pastoral landscapes along watercourses and surrounding villages and by taking advantage of set-aside to develop conservation headlands. Retention and management of field ponds would also be encouraged.

Calke Uplands

This area is a mix of well-wooded estates with historic parklands, separated by extensive tracts of open, agricultural land. Field enlargement and the effects of Dutch Elm disease have eroded much of the traditional character in the open landscapes. The aim would be to link the individual wooded estates with substantial new forestry planting and to enhance subtly areas of more traditional character around the parks.

The open landscapes have a large-scale upland character and would require complementary large-scale planting of commercial plantations and estate forestry. Areas of short-rotation coppice may be a further option. The rolling landform should be used to accentuate new planting but with care to ensure that vistas from prominent hilltops are retained. Around the parks the pattern of belts, clumps and groups of ornamental trees could be reinforced and former parkland reinstated. Hedgerows and hedgerow trees would provide links with adjacent farmland. In addition, farm woodland planting would be encouraged throughout the landscape.

The area has a strong rural character that would be best explored by forest trails. These would link important tourist attractions such as the historic parks, the townships of Melbourne and Ashby de la Zouch and the large reservoirs at Foremark and Staunton Harold. The reservoirs would provide a range of recreation and water sports facilities. High-quality leisure developments could also be located in enclosed forested settings.

With a varied range of attractions in close proximity it is likely that farm diversification would be geared towards providing a range of accommodation for visitors. Much land is likely to remain in agriculture, as there are significant areas of good quality land. Incentives for traditional management practices would be targeted towards remnant areas of unimproved grassland and the creation of new species-rich grasslands to enhance their wildlife interest.

Midland Coalfield

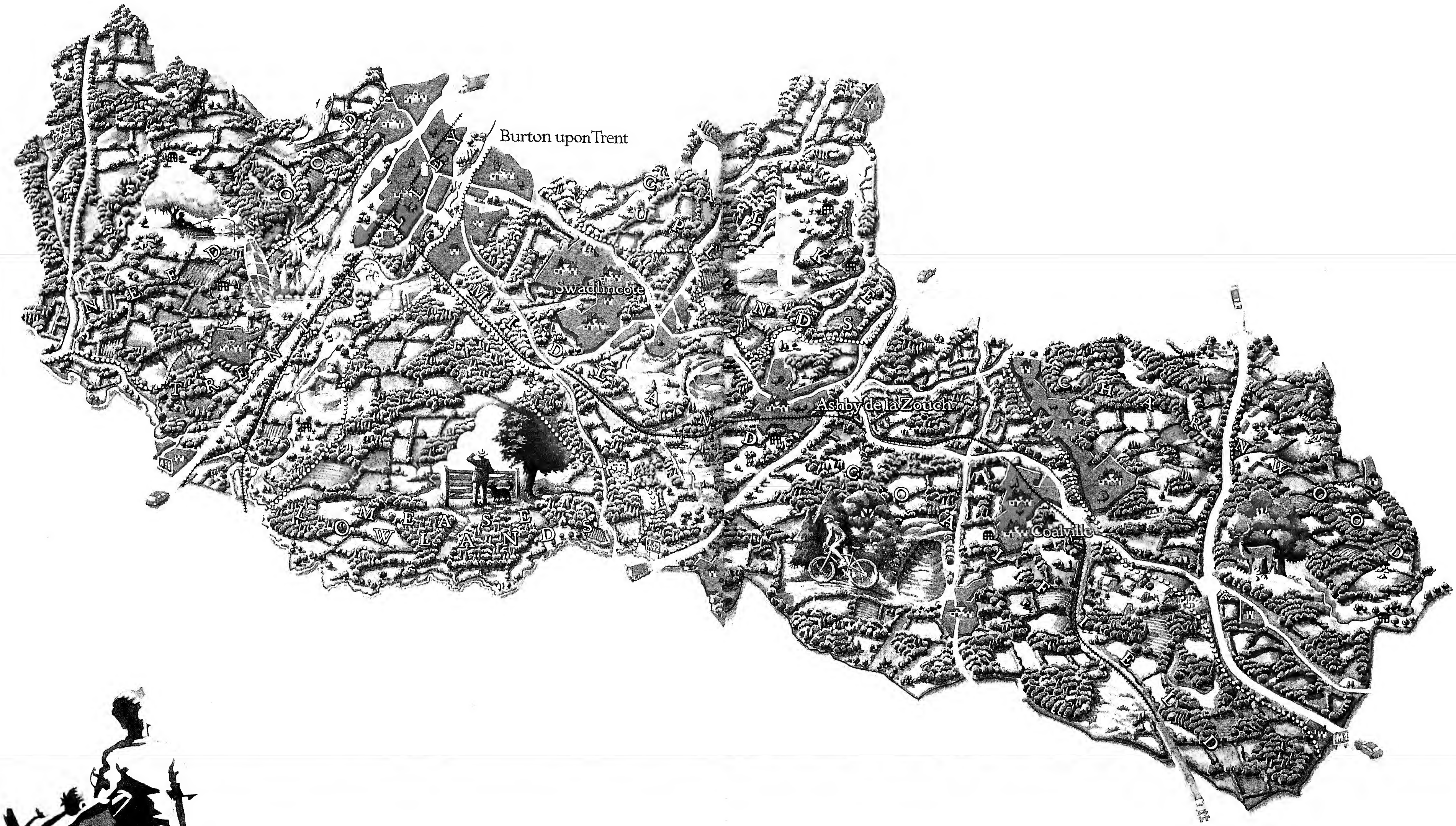
This is a very despoiled and fragmented landscape, industrially scarred by widespread mineral workings and a legacy of derelict land. Woven between this are large tracts of open, rolling farmland and straggling towns and villages. The area has a bleak appearance and a poor environmental outlook.

The Coalfield offers the biggest challenge to the National Forest as it is here that an impact would have to be made to improve the environmental perception of the area, both for its own sake and to act as an important trigger to economic regeneration. It is also strategically important to the creation of a unified National Forest, being centrally located between the isolated Needwood and Charnwood Forest areas to the west and east.

A major conversion of land to forestry throughout the Coalfield is proposed. The strategy targets the reclamation of derelict land, the restoration of mineral workings and the enhancement of rural farmland and settlements to create a whole new Forest identity for the Coalfield area. It also envisages the area as the prime focus for visitor activity, offering a wide range of sport and recreation facilities. The area has extensive opportunities as it is the focus of known major land use change related to minerals and derelict land. It has exceptional accessibility, being crossed by the A42, M1 and planned Ivanhoe railroute. It is also already a very busy and active area, with the presence of large townships and industrial influences.

Many types of forest planting would be likely in this area. Derelict and worked mineral sites would be a focus for large-scale amenity planting, providing forest settings for a mix of sport, recreation, public access and nature conservation uses. Within the urban fringe, community woodlands and forest and country parks would be prominent. Urban forestry would be a feature within towns, and amenity planting would be targeted in villages. Extensive

Map 10. The Forest vision.



One day this is how it may look. This is an impression of the future. It is not site specific. It is our Forest vision. Tell us what you think.

landscaping would accompany planned built development and efforts would be made to soften the often harsh appearance of existing built-up areas, particularly when they abut open farmland.

In the Coalfield countryside large-scale planting would be needed to balance large, open landscapes. This would be likely to be a mixture of commercial plantations, farm woodlands, areas of short-rotation coppice and agroforestry. In the historic landscape area around Coleorton finer detail would be required, with hedgerow trees and copses reflecting the small-scale character.

The various forest elements would be linked by a series of wooded corridors, with new planting associated with the trails network, former mineral railway lines, along major transport routes that form gateways into and through the Forest and by the replanting of gappy hedgerows and hedgerow trees.

The Coalfield could become a major focus for sport, recreation and tourist attractions. The area could accommodate noisy sports and otherwise obtrusive leisure developments in appropriate forested settings. Tourist attractions would be focused on the industrial heritage, historic associations with Ivanhoe and Ashby de la Zouch Castle, and the developing forest at a central National Forest visitor centre. It would be a major area for public access — both site-specific and via an extensive network of trails. Trails would link tourist and leisure attractions and would radiate from stations on the Ivanhoe railroute.

Agriculture would be likely to take on a secondary role in this area and many farm businesses would be run alongside the development of new woodlands, recreation and tourism enterprises and the management of land to improve public access and nature conservation interest. Farm diversification would have an important role, offering facilities for visitors and farm-based attractions.

There are also significant opportunities for nature conservation. Incentives would be targeted towards the management and reinstatement of riverside pasture, unimproved grasslands and heathlands. There would be particular opportunities for the recreation of heathland on areas of derelict land.

Charnwood

This is a well-wooded landscape of great diversity. It has strong historic character, extensive ecological interest and distinctive upland relief. Care would be needed to retain its particular qualities and features, notably the diverse tree cover with many ancient woods, the open, wild character of its upland peaks and summits, the distinct patterns of stone field walls, the extensive areas of semi-natural vegetation, which give it a 'heathy' character, and the local building style of granite and slate.

The distinctive upland landscape character is unique in the area and it would be important to safeguard the open, elevated feel by limiting new planting. The high peaks would provide panoramic vistas of the forest, and ways of developing well-managed access to them should be explored.

Nature conservation would have a high priority, with emphasis given to the management of ancient woodlands and areas of semi-natural vegetation. Target areas would be river valleys, upland landscapes and areas where there are concentrations of semi-natural ancient woods and unimproved pastures. Extending and reinstating habitats would also be important, particularly heathlands and acid grasslands.

Forestry should subtly enhance existing character with a mixture of farm woodlands and woods planted for nature conservation, recreation and amenity, particularly around the urban fringes. New large-scale planting would be limited by environmental sensitivities, with most opportunities on open, cropped farmland and associated with restored granite quarries. Locally, hedgerow and streamside trees and wooded parklands are features. These add significantly to the well-wooded appearance and should be regenerated. A strong hedgerow pattern should be maintained to link wooded features.

The special, rugged character of Charnwood attracts large numbers of visitors to several heavily-used recreation sites. Outdoor recreation would continue as the main theme, with the development of counter attractions and wider public access along forest trails. Reservoirs and areas of open water would be more widely used for informal recreation. In the longer term granite quarries could be restored for leisure purposes. Farm tourism would also have an important role, continuing the trend of many landholdings in this area being engaged in part-time farming.

Implementation

Proposals on the mechanisms and future administration of the Forest are contained in the Forest Business Plan. This is being considered by Government. Consultation on the strategy will also inform any decision.

The realisation of the strategy will need tobe an exercise in partnership between the public, private and voluntary sectors. Many different organisations and bodies will have the chance to contribute. Their efforts will need to be harnessed and co-ordinated to ensure that resources are well targeted to bring the strategy to fruition.

To date the lead role has been taken by the Development Team appointed by the Countryside Commission. The Team's job was to prepare this strategy and the Business Plan. Working with local authorities and all various statutory, non-statutory and voluntary organisations and the local communities, the Team has already initiated some tree and woodland planting and other Forest-related schemes, held awareness-raising events, established strong working relationships and generally spread the word about the Forest and stimulated enthusiasm for it.

Views are sought on the nature of the future administration of the Forest. It is envisaged that an enabling role will be required that would facilitate the bringing together of key partners to stimulate practical action and a collective sense of purpose. The following functions might need to be encompassed.

Policy

- formulation of policy for the Forest and updating of the Forest strategy;
- securing the involvement and commitment of the key players;
- consulting those involved in implementing and affected by the strategy;
- acting as a consultee in planning matters.

Executive action

- promotion of the Forest and its objectives;
- promotion of available grant schemes, incentives and other measures; advice and assistance with applications and 'packaging' of schemes;
- advising on the interaction of the Forest and the statutory planning process and seeking co-operation on planneing policies;
- mediation in the open land market for strategic land purchase;
- entering into or acting as agents for planting agreements;
- management of land and the provision of related services;
- quality assurance of developments in the Forest.

Fundraising

- raising and channelling non-profit funds into fulfilling and trading Forest objectives

Central government

Continuing and active support by Government, its relevant Departments of State and agencies, would be sought for the successful implementation and long-term management of the National Forest. This would include political support and, through the grant provision schemes, financial aid relevant to its creation, together with the technical advice that complements those incentives.

Local authorities

The local authorities were prime movers in bringing the Forest to the area and from the outset have been the Countryside Commission's major partners in the project. They have been very active and supportive of the Development Team's work and have taken a lead in initiating schemes on the ground. Their continued, active involvement would be crucial to the Forest's long-term success. They would have a major part to play both in its implementation and long-term management.

The planning system has a key role. It would be essential that development plans are not only supportive but positively conducive to achieving the Forest. Policy measures which are consistent across the area and which have regard to the Forest strategy would help to fulfil this. A close working relationship with the National Forest administration would also be important.

Other major areas of involvement are likely to include:

- development of recreation and access initiatives;
- visitor management and interpretation of the Forest;
- countryside management, promoting landscape enhancement incentives and urban forestry.

In all of these respects local authorities could contribute most effectively by making the National Forest a priority area within their individual programmes.

Private landowners

Private landowners are the main stewards of the land. The extent of their involvement in terms of planting and management for Forest purposes will be subject in part to the outcome of CAP and GATT reforms. It is hoped that they would increasingly be involved as implementors and managers of much of the Forest resource. It would be essential that guidance is available to ensure that landowners are fully conversant with the opportunities that the Forest offers and the incentives that are available.

Participating landowners could be encouraged to develop whole-farm plans that examine how forestry can be integrated with other forms of farm diversification. Training in new skills and expert business advice would also be needed. Representative organisations such as the Country Landowners' Association and National Farmers' Union would be well placed to work with the National Forest administration to help to channel advice and information to their members.

Through consultative mechanisms, landowners would also have the chance to influence evolving patterns of public access. This would build upon the work of the Access Working Party initiated by the Forest Development Team.

Private sector

The potential roles of the private sector might be as developers and managers of commercial leisure and recreation facilities or as sponsors of new forestry planting.

Mineral companies have an especially important role given the significance minerals play in the economy and land use of the Forest. They could take an exemplary lead in the restoration of mineral workings and the reclamation of derelict land. British Coal, in particular, as the largest single owner of land and the largest owner of derelict land, would have a crucial part to play. Long-term development strategies that meet the objectives of the Forest strategy would be an important way forward for all of the land that British Coal controls in the Forest.

Voluntary sector

The voluntary sector, including both specialist and local community groups, has a wealth of expertise, local knowledge and enthusiasm that could contribute immensely to the creation of the Forest. Local people must feel they are part of the Forest and so able to influence its development. In many cases they might be managers of locally-inspired forest schemes. Much work has already been undertaken by the National Forest Development Team to encourage local support and commitment.

There are a wide range of voluntary bodies that could be encouraged to play an active part in the Forest. The Woodland Trust could be significant in acquiring further sites for planting. The Trust have already demonstrated long-term commitment by purchasing and planting two major sites. County Conservation Trusts, and the Royal Society for Protection of Birds as owners and managers of wildlife sites and providers of ecological advice, could also be influential. Access organisations could help in planning Forest trails, building upon the work of the Access Working Party initiated by the Development Team; and the British Trust for Conservation Volunteers have expressed interest in developing a practical conservation presence in the Forest.

Ways of achieving community involvement could include: practical conservation projects; amenity tree planting schemes; tagging and replanting hedgerow trees; village orchards; developing tree and wildflower nurseries; village appraisals and parish maps; waymarking and maintaining footpaths; creating local walks and producing walking guides; cottage industries that service visitors; through events such as tree dressing and National Tree Week; and by setting up a Friends of the Forest organisation.

Emphasis might also be placed upon involving schools and developing the educational potential of the Forest. The Development Team's Growing Trees from Seed campaign has already made a start.

It will be important to harness voluntary activity and develop imaginative ways of working with local communities and schools. Members of the general public will need to be made fully aware of the scale of the undertaking, what the Forest might mean to them and how their voices could be heard.

Monitoring and review

Review procedures

The Forest strategy would probably benefit from being monitored annually with a fixed review perhaps every five years. Flexibility will be important and there may be the need to be other updating from time to time if major changes in government policy affect it. An important facet of monitoring and review might be to develop a Geographic Information System.

1. London Economics (1992), *National Forest cost benefit analysis*, London Economics, London.
2. Hooke, School of Geography, University of Birmingham (1991), *Historical geography of New National Forest Area*, University of Birmingham, Birmingham.
3. ADAS (1992), *National Forest agricultural research study*, ADAS Business Management Services, Wolverhampton.
4. Land Use Consultants (1992), *National Forest woodland character assessment*, Land Use Consultants, London.
5. Land Use Consultants (1992), *National Forest landscape assessment*, Land Use Consultants, London.
6. Department of the Environment Circular 29/92 (1992), *Indicative forestry strategies*, HMSO, London.
7. Orr, E J, Gilbertson, P, (1992), *Nature conservation requirements of the National Forest*, Tim Schadla-Hall, Director of Museums and Arts, Leicester.
8. Land Use Consultants (1992), *National Forest archaeological and historical study*, Land Use Consultants, London.
9. Forestry Commission (1988), *Farm woodland practice*, HMSO, London.
10. Countryside Commission (1993), *The National Forest: Business plan*, to be published.
11. Forestry Commission (1988), *Farm woodland planning*, HMSO, London.
12. Williamson, D R, Forestry Commission AGR 22 (1992), *Establishing farm woodlands*, HMSO, London.
13. Wilson, K, (1989), *A guide to the reclamation of mineral workings for forestry*, Forestry Commission, Edinburgh.
14. Department of Energy (1991), *Making fuels from wastes and crops*, HMSO, London.
15. McCall, I, (1988), *Woodlands for pheasants*, The Game Conservancy, Hampshire.
16. Forestry Commission (1989), *Urban forestry practice*, HMSO, London.
17. Forestry Commission (1992), *Lowland forestry design guidelines*, HMSO, London.
18. Forestry Commission (1991), *Community woodland design guidelines*, HMSO, London.
19. Forestry Commission (1991), *Forests and water guidelines*, HMSO, London.
20. Forestry Commission NAT 013 FOR 026, *Forest nature conservation guidelines*, HMSO, London.
21. Watkins, C, (1991), *Nature conservation and the new lowland forests*, Nature Conservancy Council, Peterborough.
22. National Rivers Authority (1992), *Guidelines for planting beside rivers*, NRA, Solihull.
23. Evans, J, Forestry Commission FOR 005, 1988, *Natural regeneration of broadleaves*, HMSO, London.
24. Black Country Urban Forestry Unit (1991), *Sandwell's urban forest*, Black Country Urban Forestry Unit, Sandwell.
25. Rackham, O, (1980), *Ancient woodland*, Edward Arnold, London.
26. Peterken, G F, (1981), *Woodland conservation and management*, Chapman & Hall, London.
27. Forestry Commission (1986), *Guidelines for the management of broadleaved woodland*, HMSO, Edinburgh.
28. Watkins, C, (1990), *Woodland management and conservation*, David & Charles, Newton Abbot.
29. Tourism Company (1992), *National Forest sport, recreation and tourism study*, Herefordshire.
30. Travers Morgan (1993), *Nationl Forest rights of way and access survey*, Travers Morgan, London.
31. Rural Development Commission, English Tourist Board and Countryside Commission (1991), *The Green Light: A guide to sustainable tourism*.
32. ADAS (1992), *National Forest farm profitability study*, ADAS, Wolverhampton.
33. Gould Consultants (1992), *National Forest CLA survey*, Gould Consultants, Birmingham.
34. Countryside Commission CCP 396, (1992), *Accommodation barns*, Countryside Commission, Cheltenham.
35. Nature Conservancy Council (1990), *Leicestershire: Inventory of ancient woodland*, NCC, Peterborough.
36. Nature Conservancy Council (1990), *Derbyshire: Inventory of ancient woodland*, NCC, Peterborough.
37. Nature Conservancy Council (1990), *Staffordshire: Inventory of ancient woodland*, NCC, Peterborough.
38. English Nature (1992), *The lowland heathland management handbook*, English Nature, Peterborough.
39. Andrews, J, Kinsman, D, (1990), *Gravel pit restoration for wildlife*, Royal Society for the Protection of Birds, A & C Black, Gaton Socon.
40. Farming and Wildlife Advisory Group AGR 005, 1991, *Farming and field margins*, FWAG, Kendworth.
41. Nature Conservancy Council (1989), *On course conservation: managing golf's natural heritage*, Peterborough.
42. Batten, L A , Bibby, C J , Clement, P, Elliot, C D and Porter, R F (1990), *Red data birds in Britain*, T & AD Poyser, London.
43. Avery, M and Leslie, R, 1990, *Birds and forestry*, T & AD Poyser, London.
44. Royal Society for the Protection of Birds (1985), *Birds and broadleaves handbook*, A & C Black, Gaton Socon
45. Department of the Environment PPG 16 (1992), *Archaeology and planning*, HMSO, London.
46. National Forest/British Coal (1993), *British Coal and the National Forest — a growing relationship*, British Coal Property, Eastwood.
47. Dobson, M C, Moffat, O J (1993), *The potential for woodland establishment on landfill sites*, HMSO, London.

Enclosed farmlands

Landscape type	Planting scale	Planting type	Planting design
Needwood – Needwood **Trent Valley** – Barton under Needwood **Mease Lowlands** – Coton in the Elms **Calke Uplands** – Smisby **Midland Coalfield** – Packington, Thornton **Charnwood** – Charley	Varied opportunities but generally large scale to reflect open, medium- to large-scale landscape character. Influence of country estates with game coverts evident. Smaller-scale planting of coverts would be equally appropriate. Small-scale pastoral landscapes remain around villages, with small woods and hedgerow trees. Watercourses — small copses, individual or groups of waterside trees. Small areas of parkland associated with country houses. Single trees and parkland clumps.	Large commercial plantations, estate forestry. Farm woodlands, game coverts and instant spinneys. Short rotation coppice — could suit extensively cropped landscape character. Hedgerow trees — in pastoral landscapes, around villages, along roadsides. Replanting parkland trees. Reinstating areas of former parkland/or new parkland/ agroforestry planting associated with country estates. Linear waterside trees/carr copses. Could take new golf courses with belts of trees and parkland type planting. Replanting/gapping hedgerows where pattern remains strong.	Plant to subtle landforms or tie in with existing field patterns. Hedgerow pattern become more visibly dominant in flat landscapes, where woods could fit as discrete blocks within the field pattern. Design woodlands with an irregular shape to reflect subtle landforms and override the appearance of geometric field patterns. When planting over several fields incorporate existing hedgerows using them as shrubby edges to rides wherever possible. Develop planting in an outward branching pattern. Use hedgerows to create interlock between woodlands. Woodland margins very important in open, flat to gently rolling landscape. Shape to reflect subtle landform. Create irregular shaped woodland edges. Avoid uniform regularity by continuous lines/ layers of shrubs, broadleaves or conifers. Create interest and diversity by indenting edges and overlapping different layers/groups of species; incorporate field hedgerows where appropriate; integrate hedgerow trees — mature trees provide coarser texture and rounded crowns provide a sense of continuity. Positioning of woods in relation to one another important in flat landscape. Create diversity with different sized woods. Avoid an even scatter of small woods, which may appear too small in scale. Also avoid creating solid wooded skylines. Plant to accentuate strong landscape features, eg scarp slope overlooking the Trent Valley. Identify and avoid masking views of prominent landscape features. Reveal and draw attention to them (eg church spires in Mease Lowlands). Retain vistas from prominent hilltops. Identify best examples. Retain small-scale pastoral character along watercourses — avoid continuous planting, keep one bankside clear, create dappled shade. Maintain a balance of open space (2/3) to woodland (1/3) around villages. Retain open, rugged character of rocky knolls and open summits in Charnwood. The amount of space will depend upon the importance of the feature in the landscape and the steepness of slopes below. Reinstate historic parklands where appropriate by returning arable land to pasture and replanting to the original design intentions.

Floodplain farmlands

Landscape type	Planting scale	Planting type	Planting design
Trent Valley – Trent	Large-scale planting in places — especially in open agricultural landscapes and associated with mineral workings. Archaeological sensitivities will restrict amount of large-scale planting. Smaller-scale planting in areas of small-scale pastoral floodplain. Requirement of NRA not to undertake planting that could impede river flows. Development landscaping to be commensurate with the scale of the development.	Recreation and nature conservation planting associated with water based after-use of mineral workings. Robust, shrubby quick growing species. Urban landscaping associated with proposed built development and A38 road corridor. Short rotation coppice and poplar agroforestry suited to moist soils. Reinforcement and extension of linear riverine woodland, carr copses, waterside pollards. Enhancement of pastoral hedged character with groups of riverside trees/hedgerow trees where the character remains strong. Farm woodlands in open farmland landscapes.	Large-scale planting on open farmland to be of field size and shape. Avoid coalescence which could create solid woodland screens across the landscape. Retain existing views by siting planting back from roads. Attention to woodland margins and with irregular flowing shapes and design of edges — use of shrubs, small groups of trees and single trees to avoid continuous straight lines and create visual diversity. Use woodland planting to accentuate rising ground off the river floodplain. Aim for a mix of open and wooded land, avoiding continuous wooded strips. Plant woodland blocks and wide, discontinuous belts of trees associated with open water recreation areas to create enclosure and to screen urban/industrial influences. Retain diversity adjacent to open water. In places bring groups of trees to the water's edge; elsewhere retain open ground with graduations of trees, scrub and grassland to open water. Linear riverine planting of copses and groups of trees. Irregularly spaced. Avoid creating continuous wooded cover. Maintain riverside wetland habitats. NRA require planting in floodplain to be elliptical in shape, small scale and not within ten metres of the river's edge, for flood protection purposes. Incorporate planting within, as well as around, development sites to integrate them within a strong wooded setting. Allow planting to run into built development and create strong links with the rural landscape. Avenue planting along the A38 corridor to create a wooded gateway into the Forest.

Historic settlements and enclosures

Landscape type	Planting scale	Planting type	Planting design
Needwood — Yoxal **Midlands Coalfiled** —Coleorton	Small-scale planting to reflect small-scale landscape of ancient hedged fields. Woods and spinneys most appropriate. Many hedgerow trees contribute to enclosed, small scale. Extensive large-scale planting generally inappropriate, as this would mask landscape detail and lose many qualities that form its ancient character.	Farm woodlands, copses and spinneys. Riverine copses — a feature of the River Swarburn and its tributaries. Extend wooded valley character. Hedgerow trees. Reinstatement of small remnant parklands. Replant gappy hedgerows.	Incorporate small-scale field - sized woods within the hedgerow pattern. Design with irregular shapes and margins to reflect irregular shape of field pattern. Avoid straight edges and geometric shapes. Maintain strong interlock with hedgerow pattern. Outward branching pattern to maximise impact of new woodlands while maintaining landscape detail. Encourage regeneration and new planting of hedgerow trees. Retain strong pattern of small-scale hedged fields to complement new planting. Watercourses — avoid continuous planting. Retain unimproved grassland and wetland habitats. Keep one bankside clear and retain dappled shade.

Urban fringe

Landscape type	Planting scale	Planting type	Planting design
Trent Valley — Burton West **Midland Coalfield** — Burton East, Swadlincote Ashby de la Zouch, Coalville **Charnwood** — Shepshed, Thringstone Groby, Markfield	Very complex landscape with varying degrees of scale throughout: • large-scale cropped, rural landscapes, • large-scale grassland fields reclaimed from mining, • small-scale pastoral landscapes around the urban fringe and along stream courses. Dominance of urban and industrial activity — large-scale, derelict sites fragment the rural landscape into 'pockets' of farmland. Few individual trees, poor hedgerow pattern — results in long-distance, open views. Makes the landscape feel larger than it actually is and draws attention to the urban/industrial influences. Scale of planting should reflect landscape scale. Generally smaller scale in small-scale intact landscapes; larger scale in open and degraded landscapes. Scale of planting very much depends upon the scale of the surrounding landscape.	Community woodlands adjacent to urban areas. Target open reclaimed mining sites and areas of derelict land. Recreation, landscape and conservation main planting aims. Country park, forest park, semi-ornamental parkland planting; agroforestry within the urban fringe. Landscaping associated with urban and industrial development. Large-scale structure planting in advance of new development — wide belts and woodland blocks. Short rotation planting of coppice or agroforestry on land with future mineral development potential, as a short-term use. Linear forest planting along derelict railway lines. Farm woodlands in open farmland areas. Large plantations on open field grassland sites reclaimed from mining and in larger-scale arable landscapes. Hedgerow tree planting in small-scale pastoral/mixed farmland areas on the urban fringe. Linear watercourse trees. Amenity tree planting in and around village centres. Gapping, reinstating hedgerows.	Derelict sites and mineral workings — contouring of spoil heaps to reflect local landform if possible; where not possible use planting to accentuate the artificial landform on prominent sites, design of internal shapes related to species will be important. New mineral workings should plan woodland design **in advance** to create the desired landform through mineral operations. On opencast sites maintain a balance between woodland and nature conservation opportunities, eg heathland recreation. Planting on mineral sites may be staged — each area must be well shaped and of suitable scale to be able to integrate later plantings. Use of quick-growing species on derelict land/mineral sites to create quick impact. Robust shrubby planting suitable for recreation sites. Encourage natural regeneration on derelict sites and along mineral railway lines. Urban fringes — grading of formal areas into more natural areas. Urban park–country park–open forest. Create an open tree canopy effect with trees in grassland setting merging into Forest. Important to interlock urban fringe planting with the rural forest. Scope for varied species mixes grading from more ornamental around urban areas to more broadleaves/mixtures in open farmland. Develop green fingers of woodland to run into urban areas. Planting along roadsides, mineral railways lines, stream valleys (discontinuously). In flatter, larger landscapes woodland margin design important. Maximise the layout of edges — irregular with overlapping groups of trees and shrubs. Use blocks of trees to enclose space for other uses, eg recreation. Hedgerow pattern poor and absent in places. Plant to override pattern, incorporating hedgerows as shrubby edges to rides wherever possible. Where pattern is strong use hedgerows to create strong interlinking features between woodlands.

Wooded parkland

Landscape type	Planting scale	Planting type	Planting design
Needwood – Hoar Cross, Byrkely, Dunstall, Hanbury, Greaves **Calke Uplands** – Calke, Bretby **Charnwood** – Blackbrook, Newtown Linford	Important to maintain balance between open space and woodland to retain the many features that give the area its historic character (parks, hedges, hedgerow trees, etc). Roughly 1/3 trees to 2/3 open space. Limited scope for large-scale planting. Small to medium sized woods reflect existing landscape character. Small-scale planting in parkland settings. Feature trees, clumps, belts, spinneys and copses. Small-scale planting/ regeneration of hedgerow trees and linear streamside trees — both numerous at present.	Mixed planting appropriate but important to maintain historic broadleaved feel. Mixed farm woodlands and estate forestry with larger commercial plantations away from parkland settings. Game coverts — coalescence of many small woodlands creates well wooded appearance at present. Parkland planting/ management of enclosing belts of trees, tree clumps and individual feature trees. Hedgerow tree planting/ regeneration, especially along roadsides. Maintain strong hedgerow pattern by gapping and replanting — important linking features in pattern of woodland/open space.	Landform dominant but hedgerow pattern significant when viewed from steep slopes. Plant to accentuate the appearance of valley-side and hill-top woods, but avoid continuous valley cover. Avoid planting open summits in Charnwood. Plant to landform overriding geometric hedgerow pattern where landform dominant. Irregular shaped planting to create the impression of larger scale; shapes should rise uphill in hollows, fall on convex ground. Avoid geometric shapes on skylines. Position planting, where possible, away from roadsides to retain existing views. Design of internal shapes related to species important when planting woods to landform. Design of margins very important to create flowing edges that override geometric field pattern. Avoid straight lines cutting across/down contoured slopes. High-quality design needed — long views, mistakes not easily hidden. Woodlands to be edged with hedgerows/shrubs to link with strong pattern of field hedgerows. Avoid continuous lines, overlap planting in different layers or groups to look more unified. Incorporate existing hedgerows by using them as shrubby edges to wooded rides wherever possible. Parklands — replant to integrity of original design. Coalescence important — planting of belts and groups of trees very characteristic. Planting should interlock and overlap to retain historic pattern of wooded enclosure and distinct sense of place. Reinstate areas of former park. Hedgerow trees — regeneration of oak wherever possible. Replanting only when seed source has gone. Retain characteristic 'scattered' pattern. Roadside planting a priority. Integrate hedgerow trees within the edges of new planting. Mature trees provide coarser texture and rounded crowns provide sense of continuity. Streamsides — keep one bankside clear, retain dappled shade, avoid areas of nature conservation interest, eg unimproved wet grassland, and marsh.

Industrial farmlands

Landscape type	Planting scale	Planting type	Planting design
Midland Coalfield – Stanton, Willesley, Bagworth	Generally large scale in agricultural areas, planting to reflect medium- to large-scale open landscapes. Large-scale planting associated with derelict land/former mineral workings. Smaller-scale planting around villages and associated with watercourses.	Large commercial plantations on farmland. Large-scale community/ amenity woodlands on derelict land and mineral workings. Farm woodlands. Short rotation coppice. Hedgerow trees where they remain in pastoral landscapes, around villages, along roadsides. Linear trees along watercourses. Could take new golf courses with blocks of woodland/belts of trees. Amenity tree planting in villages, pocket parks. Reinstate gappy hedgerows, especially where they link new woodland planting.	Mineral workings and derelict sites — contour spoil heaps to reflect local landform where possible. Where not possible use planting to accentuate the artificial landform. On prominant sites, design of internal shapes related to species will be important. Maintain a balance between woodland and open land on derelict land/former mineral workings. Retain regenerating heathland or other open habitats, such as grasslands and wetlands. Encourage natural regeneration of trees on derelict land. Planting on mineral sites may be staged — each area must be well-shaped and of suitable scale to be able to integrate later plantings. Agricultural landscapes — plant to landform, following hedgerow pattern only where this is dominant. When planting several fields, override hedgerow pattern, incorporating hedges as shrubby edges to rides wherever possible. Design new woods with an irregular shape to reflect landform. Avoid geometric shapes that follow geometric field enclosures. Develop planting in an outward branching pattern. Use hedgerows to create interlock between woodlands. Create irregular shaped woodland edges. Avoid uniform regularity by continuous lines/ layers of shrubs, broadleaves or conifers. Create interest and diversity by indenting edges and overlapping different layers/groups of species; incorporate field hedgerows where appropriate. Positioning of woods in relation to one another important in flat landscapes. Create diversity with different sized woods. Avoid an even scatter of small woods which may appear too small in scale. Also avoid creating solid wooded skylines. Retain small-scale pastoral character along watercourses — avoid continuous planting, keep one bankside clear, create dappled shade.

Two possible routes for a Forest long distance trail

1. Beacon Hill, Bradgate Park, Snibston, Coleorton, Calke Abbey/Staunton Harold/ Foremark Reservoir, Bretby, Burton upon Trent, Trent and Mersey Canal, Branston Water Park, Tatenhill, Jacksons Bank.
2. Beacon Hill, Bradgate Park, Ulverscroft Valley, Normanton, Willesley, Moira, Coton in the Elms, Trent Valley, Swarburn Valley, Jacksons Bank or Coton to Branston Water Park, Tatenhill, Jacksons Bank.

Key shorter trails

Needwood

- Branston Water Park to Needwood and Jacksons Bank.
- Jacksons Bank to the Staffordshire Way.
- Jacksons Bank, Swarburn Valley to Trent Valley long distance path and recreation/sports sites.

Trent Valley

- River Trent long distance path.
- Trent and Mersey canal towpath.
- Links between recreation/sports sites/Burton washlands.
- Links out from Burton upon Trent into Needwood and Swadlincote sports/recreation opportunity areas.

Mease Lowlands

- Links from Rosliston to Trent Valley routes.
- Links from Rosliston to Ashby Woulds and Donisthorpe areas of opportunity.
- Mease Valley trail linking Trent Valley to Ashby Woulds area of opportunity.

Calke Uplands

- Links between reservoirs, historic parks and Melbourne.
- Links south to Ashby de la Zouch.
- Links to Swadlincote areas of opportunity.
- Links north to Trent Valley.

Midland Coalfield

- Links from Ashby de la Zouch to Lount area of opportunity and Coleorton.
- Donisthorpe area of opportunity to Moira/Measham trail and east to Heather/Ibstock areas of opportunity.
- Moira Measham trail to Ticknall tramway.
- Sustrans Dover/Inverness cycle route — Worthington to Ashby and Measham.
- Snibston to Coleorton and Ibstock/Heather.
- Snibston to Beacon Hill (Charnwood) via Blackbrook Reservoir.
- Measham to Moira along Ashby de la Zouch canal extension.
- Coleorton link north to equestrian Mid Shires Way.
- Circular routes from all Ivanhoe line stations.

Charnwood

- Beacon Hill — Bradgate Park — Ulverscroft Valley circular route.
- Bradgate Park to Thornton and Ibstock Heather.
- Charnwood links to Leicester.
- Charnwood links to Loughborough.
- Link to the Leicestershire Round long distance path.
- Beacon Hill to Coalville.

Possible routes using derelict railway lines

- Calke Abbey — Ashby de la Zouch.
- Ashby de la Zouch — Castle Donnington.
- Lount — Coalville and south to Heather — Shackerstone.
- Donisthorpe — Measham — Shackerstone.
- Thringstone — Loughborough.

A Forest visitor centre could form the base for the National Forest administration.

Some elements of this centre might include the following.

- A striking building to act as an attraction in itself.
- Interpreting the link between growing trees and managing woodlands and the utilisation of timber and wood products.
- A hands-on 'tree experience' aimed at children and putting over simple science — "experience the power of sap rising ...".
- The story of the growing forest, including some interactive questions, possibly computer-game based, on how *you* would take the decisions.
- A woodland craft centre based on well managed individual workshops; these might include:
  - —makers of furniture, boxes, walking sticks and all kinds of wood produce;
  - —wooden musical instrument makers;
  - —pencils and other small wooden items;
  - —cricket bat manufacture and other specialist wood turning and moulding skills;
  - —basket making;
  - —pottery using wood-ash glazes;
  - —coopers; etc.
- A high-quality retail outlet for wood products, incorporating some of the above. This could also include wood/herbal essences, perfumes, remedies and so on.
- A tree nursery with potted trees for sale and advice on their care.
- A creative catering outlet with a heavy woodland theme, both in decor and design and in food prepared for eating or purchase — nuts, nut roasts, wood-smoked meats and fish, birch-sap wine, berries...
- A high-quality woodland adventure playground.
- An arboretum, capitalising on seasonal colours.
- Woodland activities, including charcoal burning.
- A sculpture trail.
- Exhibitions of wood-based art, paintings, photography etc.
- A venue for drama, poetry, dance; interpretation of forest themes, with audience interaction (especially for groups).

	Wet sites	Light, dry soils	Heavy soils	Acid	Neutral or alkaline	Exposed sites
Alder, black *Alnus glutinosa*	*				*	
Apple, crab *Malus sylvestris* ssp. *sylvestris*		*	*		*	
Ash *Fraxinus excelsior*	*	*	*		*	*
Aspen *Populus tremula*			*		*	
Birch, downy *Betula pubescens*	*	*	*	*	*	*
Birch, silver *Betula pendula*		*	*	*	*	*
Blackthorn *Prunus spinosa*	*	*	*		*	*
Broom *Cysticus scoparius*		*		*		*
Buckthorn, alder *Frangula alnus*	*			*	*	
Buckthorn, purging *Rhamnus catharicus*			*		*	
Cherry, bird *Prunus padus*	*				*	
Cherry, gean *Prunus avium*			*		*	
Dogwood *Cornus sanguinea*		*	*		*	
Elder *Sambucus nigra*		*	*		*	
Elm, wych *Ulmus glabra*			*		*	*
Gorse *Ulex europaeus*		*		*	*	*
Hawthorn, common *Crataegus monogyna*		*	*	*	*	*
Hawthorn, midland *Crataegus laevigata* §			*		*	
Hazel *Corylus avellana*		*	*		*	*
Heather *Calluna vulgaris*		*	*	*		*
Holly *Ilex aquifolium*		*		*	*	
Lime, small-leaved *Tilia cordata* §	*	*	*	*	*	
Lime, large-leaved *Tilia platyphyllos* §			*		*	
Maple, field *Acer campestre*		*	*		*	
Oak, common *Quercus robur*	*		*	*	*	*
Oak, sessile *Quercus petraea* §		*		*	*	*
Poplar, black *Populus nigra* §	*		*		*	
Poplar, grey *Populus canescens*	*				*	
Privet *Ligustrum vulgare*		*	*		*	*
Rose, dog *Rosa canina*		*	*		*	*
Rose, field *Rosa arvensis*			*		*	
Rowan *Sorbus aucuparia*		*		*		*
Service-tree *Sorbus torminalis* §			*	*	*	
Spindle *Euonymus europaeus*			*		*	
Spurge-laurel *Daphne laureola*		*	*		*	
Wayfaring-tree *Viburnum lantana*		*	*		*	
Whitebeam *Sorbus aria*		*			*	*
Willow, almond *Salix triandra*	*				*	
Willow, crack *Salix fragilis*	*				*	*
Willow, goat *Salix caprea*	*		*		*	*
Willow, grey *Salix cinerea*	*			*	*	*
Willow, osier *Salix viminalis*	*				*	
Willow, purple *Salix purpurea*	*				*	*
Willow, white *Salix alba*	*				*	*

§ only use stock of local provenance

Birds	Habitat requirements
Red kite Goshawk Buzzard Barn owl Raven	A mixture of mature woodland for nesting sites and farmland and natural open land for hunting and feeding
Nightjar Nightingale Redstart White throat	Species of scrubby vegetation; young stage plantations; and woodland restocking areas up to 15 years old
Corn bunting Linnet Lapwing Turtle dove	Farmland species requiring a mixture of arable land and grassland for ground nesting and feeding purposes
Red-legged partridge Quail Common partridge	Birds of conservation headlands requiring hedgerow cover and grassland strips for nesting and feeding
Whinchat Stonechat Sedge warblers	Birds of heathland and scrubby habitats
Snipe Red shank Yellow wagtail Lapwing Curlew Wigeon Pochard Gadwall Teal	Species requiring wet grassland and associated open water for nesting and/or feeding. A threshold of 200 hectares would support viable breeding populations

Industrial land

There are approximately 359 hectares (ha) of allocated industrial land within the National Forest Boundary (Table 1); approximately half of this has planning permission, the remainder is allocated within local plans.

The principal employment land locations are Coalville, with new council-led and private sites (more than 100 ha), M42 corridor (46 ha) and A38 corridor (more than 100 ha).

The major land owners are British Coal (83 ha), Bass plc (one 54 ha site) and the local authorities (46 ha).

Take up rates across the Forest area would appear to be in the order of nine ha per annum on average (5.3 ha in Leicestershire, 1.4 ha (est) in Staffordshire and 2 ha (est) in Derbyshire).

Industrial land prices in the area are in the order of £120,000 – £160,000 per acre and have fallen by approximately ten per cent per annum over the past two years.

Residential land

There is a total of approximately 450 ha of land scheduled for residential development; enough to accommodate some 11,000 new homes.

The great majority of sites fall within the four principal urban areas (see Table 2). Most are accounted for by a few large allocations, such as the following:

		Housing Units
Brizlincote valley (Burton)	W Davies	605
Branston (Burton)	Local plan	1,370
Church Gresley (Swadlincote)	Local plan	1,000
Ashby (upper Packington Road)	Searanke Homes	121
Broomleys Road (Coalville)	British Coal	350
Grange Road (Coalville)	Local plan	800
Ratby Church Farm/ Fenndale Drive (Ratby)	Cawrey Homes	202
Chitterman Way (Markfield)	NR Fitchett	197
	Total	**4,645**

In addition, a new settlement of 1,500 homes is proposed in the draft East Staffordshire Local Plan in the Needwood area, which means that the top ten major sites (above 100 units) account for more than 50 per cent of expected development.

Approximately half of the sites have full or outline planning permission, the remainder being allocated in local plans.

The annual take up of residential land in the National Forest area is in the order of 40 hectares per annum (see Table 3).

Residential land prices are in the order of £200,000 – £300,000 per acre for serviced land. Virtually all new housing development is built by the private sector. Current completion rates are low.

Table 1. National Forest: Industrial land availability (site above one hectare).

Location	Hectares	Ownership	Status*	Comment
Hinckley & Bosworth District	—	—	—	No significant sites at present; application at Bardon (15 hectares).
North West Leicester District				
ASHBY				
Nottingham Road	1.9	Granada TV	A	Held for expansion.
Smisby Road	3.31	KP	F	Held for expansion.
Flagstaff 42	10	Ashby Development	F	Infrastructure work under way, sites being marketed.
South of Nottingham Road	8.1	British Coal	A	Site being marketed for speculative development. Formerly opencast.
COALVILLE				
Bardon Hilltop	14	Charles St Buildings	F	Existing estate with infrastructure, remaining sites being marketed leasehold.
Bardon 22	15	Galliford plc	A	Site sold to Nestle leaving approx four hectares to be developed. Developer and occupier contributions agreed.
Bardon Interlink	44	Ashford Developments	A	Planning permission applied for, including landscaping.
Bardon Business Park	12	Wilson Bowden	A	Planning permission applied for, including landscaping.
Elistown Colliery	8	British Coal	A	Allocated for industrial re-use (part DLG needed, part speculative).
Hermitage Industrial Estate	1.54	Leicester County Council	F	Remainder of existing site. Fully serviced.
Whitwick Business Park	10	NW Leicester District Council	F	Remainder of existing site. Fully serviced.
Coalville Brick works	9.31	Leicester County Council	F	DLG funded. Site work commenced Jan 1992.
ASHBY WOULDS				
Spring Road	16.19	British Coal	O	Unlikely to be developed due to infrastructure constraints. Part of Ashby Woulds feasibility area.
Ellistown Pipes	1.91	Hepworth plc	F	Held for expansion.
Westminster Ind Estate	18	Leicester County Council	F	Remainder of existing site. Fully serviced.
South Derbyshire District				
Hearthcote Road, Swadlincote	7	South Derbyshire District Council	F	Remainder of existing site. Fully serviced.
Woodville	6.97	Private	F	Held for expansion.
Overseal	3.43	Private	F	Held for expansion.
Cadley Hill	24	British Coal	A	Nadins site subject to opencast — unlikely to come on stream until after year 2000.
Cadley Hill	13	British Coal	A	Subject to open casting. Due for early release.
South of Cadley Hill	14	British Coal and others	A	Extension to Cadley Hill estate required.
East Staffordshire District				
Shobnall Branston	54	Bass plc	O	Speculative development site. Part held for expansion.
Fatholme Farm	34	Private	F	Site for speculative development. Requires infrastructure.
Needwood (Lancaster Park)	10	Private	A	Local plan allocation site yet to be identified.
SE Wellington Road	4	St Modwen	F	Remainder of speculative development site with infrastructure.
South of Branston	13.27	Private	A	Speculative development site allocation.
South of Branston	1.6	Conder	O	Held for expansion.
Total	**358.53**			

***Planning status key**
O: Outline
F: Full
A: Allocated

Status
With planning permission: 197
Allocated: 359

Table 2. National Forest: Allocation in major centres.

Location	Allocation (Housing units)
Burton	2,927
Swadlincote	2,036
Ashby	480
Coalville	1,531
Markfield	314
Ratby	249
Total	**7,537**

Table 3. National Forest: Residential land allocations.

District	Allocated sites (Housing units)	Annual take up (Housing units)
Charnwood	11	3.2
North West Leicestershire	2,600	238
Hinckley	746	182
S Derbyshire	2,538	238
E Staffordshire	4,508	297
Total	**10,403**	**958.2**
Hectares (at 24 per hectare density)	433 hectares	40 hectares

Introduction

The boundary of the National Forest encloses 502 square kilometres of the East and West Midlands and should be indicated on the key diagram for structure plans and the proposals map for local plans.

The implementation of the National Forest should be consistent with the main objectives of structure and local plans but is of such significance that it requires specific policies and proposals. Its introduction in local plans will emphasise the commitment of the councils to ensuring that new investment is complementary to the protection and enhancement of the natural environment and the interdependence between development and the creation of the Forest.

The control of development that takes place within the Forest will be, as it is now, a matter for the local authorities to determine through the local authority planning system.

By the year 2010 the Forest will have radically changed the appearance of the area; stimulated new activities and investment; and raised the profile of the area nationally.

The Forest will help to attract new business activity and increase the number of people wanting to live in the area. Proposals for new leisure and tourist facilities that make use of the Forest as a resource will follow. This will bring substantial benefits to the area — new jobs, a more diverse economy and better facilities for local people. The councils should at the same time be concerned to ensure that development does not detract from the environment that the Forest will create.

Within the National Forest designated on the key diagram the following policy is recommended as a guiding principle.

> *"Within the National Forest, provision will be made for the planting of woodlands with public access, subject to ecological and environmental constraints. Within the rural area of the National Forest, development that facilitates its use and enjoyment as a woodland resource will normally be permitted. Where appropriate, permission for development that involves new buildings, significant structures or other operations, will be the subject of conditions required to achieve an appropriate woodland setting. All substantial developments will be required to reflect the forest context in their accompanying landscaping and planting."*

This is being proposed as a suggested policy to incorporate in the draft Leicestershire County structure plan and thereafter the Staffordshire and Derbyshire plans. It should be incorporated in the overall strategy section of the plan rather than the environment section.

It is recognised that high landscaping standards may require the allocation of larger areas of land to accommodate the same level of development activity and it is suggested that the strategic planning authorities carefully consider their policy statements with regard to 'net' and gross allocations of development land within the Forest area.

Any additional land allocations should be specifically linked with the higher landscaping standards. They should not provide a means of altering strategic planning policies, which remain the responsibility of the relevant local planning authorities.

The planning context within which the Forest will come about will be embodied in local plans. The planning system has a vital part to play in the implementation of the Forest. Local plans should identify the contribution that development is expected to make to the furtherance of the National Forest in addition to the means of implementing it that do not require planning permission.

General policies

The concept of the National Forest is unique and of national importance. As such it warrants the adoption of land use policies that would not otherwise pertain. The policies are recommended in recognition of the long-term environmental and commercial enhancement that the Forest will bring to the area.

All development proposals within the area should normally reflect the Forest context in their accompanying landscaping and planting proposals.

In assessing landscaping and planting proposals the local planning authorities will have due regard to the National Forest strategy.

Within the Forest area the councils should encourage the planting of woodlands and public access to them, where this does not conflict with ecological and environmental constraints.

The local authorities are already mindful of the need to consider policies for development beyond the immediate plan period. Local plans make reference to longer term proposals that will extend beyond the plan period. This will apply in the Forest where the local authorities believe that proposals for woodland planting should take account of a continuing need to find land for development. In reviewing local plans and future development plans, the councils will take account of the woodland setting of development land. The local authority should consider whether sites with a woodland setting have potential for development. The extent of planting required for development sites should also be considered, together with the appropriate infrastructure and the general suitability of the site to meet development demands at that time.

Landscaping and design standards

All landscaping proposals associated with development in the Forest should include arrangements for the future maintenance and management of planted areas, in accordance with good arboricultural practices. The council should normally require the replacement of dead, diseased or damaged trees and any failed planting during the initial five years maintenance period.

It is important that a high standard of lay out and building design is pursued in the Forest area so that development properly integrates into a forest setting. Equally important is the treatment of open spaces between buildings and the creation of links into the Forest.

All built development within the Forest should be of a high quality. The design and construction materials of buildings, and the lay out and planting of the open spaces between them, should reflect the local architecture and the Forest setting. Particular emphasis should be placed on integrating open spaces with footpaths and other routes through the Forest.

The councils should prepare design briefs for significant proposals, including the levels and type of planting necessary in each case.

To assist prospective developers in complying with the policies, the following guidelines are suggested in addition to the other standards outlined in the plans. That is, they are *additional* to existing guidelines relating to factors such as open space, play areas and building densities, which should still be adhered to.

Urban housing sites

New or redevelopment sites of less than 1 hectare within urban areas and the existing villages.
— No additional landscaping required.

New or redevelopment sites of between 1 hectare and 2 hectares.
— 10 per cent of site area to be planted with trees.

New or redevelopment sites of more than 2 hectares.
— 15 per cent of site to be planted with trees.

This recognises the constrained nature of urban housing sites on land that has previously been used for other purposes but reflects the ability of larger sites to accommodate suitable landscaping.

Urban fringe housing sites

Sites of less than 0.5 hectare.
— No additional landscaping required.

Green-field sites of less than 1.5 hectares on the urban and village fringe.
— 20 per cent of the site to be planted with trees.

Sites of more than 1.5 hectares.
— On-site tree planting equivalent to the gross external area occupied by the dwelling plus a multiple of five times that area planted adjacent to the site boundary, or ten times that if planted away from the site.

This recognises the need for any new 'green-field' allocations of land on the urban fringe to be accompanied by proposals to create a good quality woodland setting both within the site and in the adjacent surrounding countryside.

Rural housing

Although development outside the defined boundaries and the larger villages will be rare, the following guidelines should operate where development is allowed.

Sites of up to 3 dwellings.
— No additional planting requirement.

All other sites.
— 20 per cent of site area to be planted with trees plus a multiple of five times the footprint of the development for planting adjacent to the site boundary, or ten times this for planting away from the site boundary.

Industrial and commercial development

Where the location of new industrial and commercial sites in the Forest accords with the employment and environmental policies in local plans the local planning authority should normally require significant high-quality landscaping to form part of the proposal. In particular along principal road frontages a minimum depth of 30 metres of woodland planting should be required. Along estate roads within the site between seven to ten metres will be appropriate. In both cases it is also suggested that structural landscaping is provided around the development at a rate of five hectares of planting per hectare of development. Where it is not possible for this additional planting to take place within 400 metres of the site boundary it is suggested that the requirement should double.

Forest-related development

The main foreseeable forest-related developments are likely to be:

- operational activities such as car parks and interpretation facilities;
- tourism, recreation, sport and leisure facilities;
- restoration of derelict land and mineral workings to woodland, public open space, leisure use or wildlife habitat;
- farm diversification involving land, redundant buildings and in some cases new development;
- rural and forest enterprises, including visitor attractions and forest businesses (timber processing, woodland products, craft industries, tree nurseries).

The local plan authorities should encourage and accommodate forest-related development which is compatible with the Forest and which assists in promoting its objectives. Planning policy should also ensure that inappropriate development that would have a detrimental effect on the Forest area is resisted.

Proposals for forest-related uses will have to be considered against policies and criteria set out elsewhere within structure and local plans. They will include environmental, transportation and recreational policies and, in particular, policies of special landscape constraint, eg areas of particularly attractive countryside, green belt, great landscape value, etc.

Forest-related development must show a clear functional link between the proposed use and its forest setting. Development should not be acceptable merely because the proposer is willing to plant trees.

Major forest-related development must normally be associated with an area of significant afforestation.

Operational activities should normally be permitted outside areas of special constraint where they do not involve the construction of significant new buildings.

Operational activities should be carefully considered within areas of special constraint where they involve the construction of significant new structures or will involve the creation of significant traffic noise, or constitute other activities likely to be detrimental to environmental amenity.

Areas of special constraint may need to be reconsidered by each local authority in the light of the Forest strategy.

Outside areas of special constraint, development which facilitates public use and enjoyment of the Forest should be acceptable provided that it shows: a clear functional link with the Forest; it meets criteria laid down elsewhere in local plans; it is of a scale, siting and design that are appropriate; it is commensurate with the protection of environmental amenity; and it is accompanied by proposals for creating an appropriate forest setting.

The forest setting will normally be at least ten times the operational site area of the proposal and should be secured by means of an appropriate legal agreement. The site of the operational area should be defined as the remainder of the application site to which the tree planting agreement does not apply.

These standards may have to be relaxed or reconsidered in the case of extensive land uses not involving significant built development, or uses involving benefit to the local community.

Where forest-related development is acceptable, planting should be expected to accompany the development. However, there may be a situation where there is insufficient land holding to accommodate the whole of an on-site requirement. In such an instance, it should be possible to negotiate with the local planning authority to incorporate some of this requirement into off-site provisions.

In exceptional circumstances, if developers are unable to provide/implement the above requirements, the local planning authority may have to consider a financial contribution, equivalent to the cost of planting, to be paid into an off-site planting fund.

All landscaping requirements, and the management thereof, should be secured through the use of appropriate legal agreements.

Countryside policies

Within the National Forest, the local planning authority should make provision for the creation of new woodland, both in its own right in accordance with the Forest strategy and, where opportunities arise, in association with development proposals.

Within the National Forest, the local planning authority should not normally permit development which might destroy, damage or fragment important existing woodland. Where acceptable development would have an impact on existing woodland, the local planning authority should seek to compensate for loss of woodland and ensure the provision of new woodland where appropriate.

Within the National Forest, the local planning authority should take measures to secure the proper management of new and existing woodlands in accordance with:

- the aims of the National Forest,
- the interests of nature conservation,
- the interests of visual amenity,
- the desirability of maximising public access,
- the principles of good woodland management.

Within the National Forest generally, the local planning authority should also protect and improve the environment by:

- promoting awareness of grant aid and other schemes of assistance from all relevant sources;
- using its own resources for tree planting and environmental enhancement to complement the aims of the National Forest strategy;
- seeking to establish countryside management projects and landscape conservation initiatives in cooperation with private landowners;
- encouraging the retention of important trees and hedgerows through agreement and by using planning powers;
- promoting and encouraging the creation of new wildlife habitats in their own right or as part of new development proposals.

In considering proposals for development in the National Forest the local planning authority should seek to maintain and improve the network of public rights of way.

Agricultural buildings and tenure

New agricultural buildings

New agricultural buildings could have a significant impact on the environment of the rural parts of the Forest area. It is important that the form, siting and impact on the landscape is considered. It is also important to ensure that their visual intrusion is minimised.

Where new agricultural buildings are proposed within the Forest area, adequate planting should be provided to ensure that the building is appropriately screened and that it does not have an intrusive impact on the landscape of the Forest.

There are often opportunities for re-using or adapting existing buildings in the countryside for new commercial, industrial, recreational and tourism uses. There are likely to be opportunities for such conversions and adaptions within the Forest area to accommodate forest-related development.

When assessing planning applications for the re-use or adaptation of a rural building, the primary consideration should be whether the nature and extent of the new use proposed for the building is acceptable in planning terms. It is important that the proposed new use of a building is sympathetic to the forest character of the area in which it is located.

The conversion of existing agricultural buildings within established settlements for residential purposes may well be appropriate providing that the design of the proposal is in keeping with its surroundings, and normal planning criteria can be met.

Proposals for the conversion of rural buildings to alternative uses should be accompanied by suitable proposals for ensuring an appropriate woodland setting and should normally be associated with an area where significant afforestation is taking place within a one kilometre radius.

Land tenure

There is 40 per cent tenanted land within the Forest area. Tenant farmers fear that the Forest could be a potential threat to their agricultural holdings. Planning permission for forest-related development on tenated land can allow a landlord to serve an incontestable notice to quit upon the tenant. The tenants fear that the detrimental financial effect on the whole farm will be far greater than the compensation due under current provisions.

Annex A of PPG7 provides guidance on development involving agricultural land and the considerations that need to be taken into account. In drafting local plan policies due regard should be taken of this guidance, notably where there might be disturbance to agricultural activities or the overall viability of the tenanted holding is affected. Such factors should be a consideration when planning authorities are determining applications.

Table 1. National Forest consents.

Location	Operator	Mineral	Size (hectares)	Consent/date	Timescale	Reclamation	Comment
Shepshed	ARC	Igneous rock	50	N/A	By 1993	Screen 10 ha only	Large established rock quarry
Shepshed	Charnwood Brick & Tile	Clay	8	N/A	By 1997	Agriculture	
Shepshed	Charnwood Brick & Tile	Clay	14	Extension	After 2005	Woodland	New plan allocation
Desford	Desford Brickworks	Clay	6	—	By 2001	Agriculture	
Desford	Desford Brickworks	Clay	33	Extension	After 2006	Agriculture	
Ibstock	Ibstock Brick plc	Clay	North 15, South 40		By 2001	15 ha industry/housing/agriculture 20 ha forestry	
Ibstock	Ibstock Brick plc	Clay	30	Extension	By 2006	Forestry	Plan allocation
Ashby Woulds	British Coal Hepworths	Coal Clay	400		By 1995, 50 ha By 2006, 100 ha	After 2001, 150 ha By 2001, 100 ha	Under discussion
Heather Brickworks	Butterly Brick	Clay	33			After 2005	Agriculture/lakes
Whitwick Quarry	ARC	Igneous rock	100		After 2006	Screening only 20 ha	Extension planned
Bardon Quarry	Evered Bardon plc	Granite	100 est.		2050	Screening 40 ha only (estimate)	
Cliff Hill Quarry	Tarmac plc	Granite	100 est.		After 2006	Screening 30 ha now (estimate)	
Old Cliff Quarry	Tarmac plc	Granite	30 est.		After 2006	Screening 10 ha now (estimate)	
Coalfield North	British Coal	Coal	1B0		1993-95	90 public open space, 70 woodland, 20 agriculture	Restoration due
Lounge	British Coal	Coal	136		By 1993	66 ha wood, 70 ha agriculture	
Measham	Clay Colliery Co	Coal	14		1993	Agriculture 7 ha, wood 7 ha	Off-site screening also
Newbold	Douglas Concrete & Aggregates	Sand/gravel	99	Permitted 4.9.B9	Extraction to 1994	Agriculture 199B	Active
Newbold North West Ext	Douglas Concrete & Aggregates	Sand/gravel	53	Current application	Extraction 17 years	Agriculture and forestry	Put as woodland
Catholme/Barton	ARC Western Ltd	Sand/gravel	22B	Permitted 12.10.72	Extraction to 2005	Lakes 2006	Active
Tucklesholme Farm	Douglas Concrete & Aggregates	Sand/gravel	79	Current application	Extraction to 2001	Lakes 2003	
Alrewas	Redland Aggregates Ltd	Sand/gravel	67	Permitted 5.9.73	Extraction to 1995	Agriculture 2000	Active
Alrewas North Ext	Redland Aggregates Ltd	Sand/gravel	31	Permitted 14.6.91 Ext	Extraction to 1996	Lakes 1997	Active
Bretby	Bretby Brick & Stoneware	Clay/coal	32.5		2001	Public open space	Put as wood
Swadlincote	John Knowles	Clay/coal	20.1		Completed	Agriculture	Ended
Nadins	British Coal	Coal	1B9		1999	Public open space golf course. Agriculture and industry. Forest estimated at 50 ha, golf at 100 ha, industry at 39 ha.	
Lounge remainder	British Coal	Coal	42		1995	Woodland	
Lounge disposal point	British Coal	Disposal point	30		1995	Agriculture	
Castle Gresley	Private	Sand/gravel	9		2000	Agriculture	Dormant
High Cross	British Coal	Coal	29.4		1994	Road by-pass, agriculture	Commenced 1992
Towpath	Murphy Bros	Coal	52		1997	Nature conservation, agriculture	Commenced 1992
Bretby	Private	Coal/waste	14.7		1999	Agriculture/Public open space	Commenced
Gravel Pit Hill	Lee Environmental	Waste	8.B		1993	Public open space/heath	

Source: Compiled from local authority records; (some figures are approximate).

Timescales are estimates provided by the minerals planning officers for each authority area.

Notes

Public open space

It is assumed that public open space would accord with the National Forest proposal and these areas have therefore been calculated as 'woodland' in the summary.

Table 2. National Forest derelict land.

Site name and location	Area (hectares)	Funding method	Time-scale	Proposed after-use
Works Yard, Albert Village	0.7	D	S	W
Mine Site, Littleworth	1.7	O	M	A
Colliery site, Overseale	17.6	O	S	A/W/T
Railway Sidings Overseal	1.0	O	S	A/W/T
Clay Pit, Spring Cottage	14.4	D	S	R
Railway, Ashby Woulds	3.2	D	M	R
Spoil Heaps Ashby Woulds	6.9	D	S	R
Clay Pit, Moira	7.6	D	M	H
Clay Pit, Willesley	28.1	O	M	W
Clay Pit, Moira	1.4	O	M	W
Donisthorpe Colliery Tip	29.3	D	S	R
Clay Pit, Ashby Woulds	7.8	O	M	W
Rawdon Colliery	28.0	O	S	E
Moira Pottery, Reservoir Hill	6.5	O	S	A
Moira to Measham Railway	10.0	D	S	R
Moira Station, Moira	0.5	C	S	W
Donisthorpe Colliery	15.0	D	S	H
Moira Subsidence Flash Moira	1.0	D	M	R
Bagworth Colliery	6.5	D	S	W
Nailstone Colliery	39.0	O	L	W
Desford Colliery	7.6	C	S	W
Bagworth Station	2.35	C	S	R
Newbold Brickworks	9.5	D	M	R
Ellistown Colliery	4.0	C	M	E
Walton Way Drift	3.0	D	M	R
Coal Stockingyard CV	5.81	D	S	R
Railway CV	3.37	D	L	R
Clay Pits, Heather 861	8.09	O	L	R
Derby Road, Burton	5.5	C	M	E
Needwood Airfield	17.0	C	M	H
Dismantled Railway, Bretby	1.2	O	M	R
Gravelpit Hill, Bretby	0.3	D	S	R
Former Quarry, Calke	0.2	O	M	R
Former Sand Quarries, Gresley	8.5	D	L	R
Westbrook Farm	0.4	D	M	A
Former Sand Quarry, Melbourne	2.2	D	M	R
Rear of West Road, Weston	1.1	D	M	R
Field off Weston Road, Weston	0.5	O	M	A
Railway Sidings, Weston	3.0	D	M	R
Gravelpit Hill, Hartshorne	4.2	O	S	R
New Street, Church Gresley	0.5	C	S	R
Ash Farm Nursery	0.5	D	M	A
Railway Land, Woodville	14.4	D	L	R
Cadley Hill	50.0	O	M	R
Quarry Bretby Pottery	12.1	O	M	R
Snibston Colliery	33.0	D	S	R
Tip, Donnington Le Heath	2.6	O	L	A
Sand Pit, Ibstock	1.08	O	L	R
Colliery, Lount	20.6	O	M	W
Canal, Measham	6	D	M	R
Gallows Lane, Measham	1.1	D	L	R
High Street, Measham	0.72	C	L	H
Colliery, Minorca	12.2	O	S	W
Brickworks, Newbold	11.7	C	L	H
Bradgate Drive, Whitwick	0.6	C	L	H
Holly Hays, Whitwick	1.66	C	L	R
Goods Yard, Woodville	0.62	C	L	R
Total	**434.4**			

Source: Local authority records; some figures are approximate.

Notes

Funding method

C:	Contributions by developers or others
D:	Derelict Land Grant
O:	Opencasting/minerals operating

Timescale

S:	Short-term (by 1995)
M:	Medium-term (by 2001)
L:	Long-term (by 2001)

The timescale for restoration is hard to predict. Short-, medium- and long-term horizons should be considered as estimates.

After-use

A:	Agriculture
E:	Employment use
H:	Housing use
R:	Recreation/public open space (it is assumed that this would generally accord with forestry strategy)
T:	Transport
W:	Woodlands/tree planting, with or without public access

Table 3. Derelict land summary (hectares).

Likely restoration by funding method (all sites)

DLG	244.87	51%
Opencast/minerals	185.74	38%
Developer contributions	52.75	11%
Total	**483.36**	

Likely restoration priority/timescale (all sites)

Short-term	117.81	24%
Medium-term	265.61	55%
Long-term	99.94	21%
Total	**483.36**	

Likely restoration by after-use (all sites)

Woodland	123.86	26%
Agriculture	45.20	9%
Recreation/public open space	223.18	47%
Industry	49.20	9%
Housing	41.42	9%
Total	**482.86**	

Sites possibly to be restored through Derelict Land Grant funding by timescale

Short-term	102.70	(69.4 of which is in Ashby Woulds; remaining 33.3 at Snibston)
Medium-term	87.5	
Long-term	54.67	
Total	**244.87**	

Sites restored to woodland/recreation by priority/timescale

	Woodland	Recreation	Total
Short-term	20.56	56.75	77.31
Medium-term	57.80	92.50	150.30
Long-term	45.50	73.93	119.43
Total	**123.86**	**223.18**	**374.04**

Sites likely to be restored to woodland/recreation by funding method

DLG	7.20	199.77	206.97
Opencast/minerals	109.00	18.78	127.18
Contributions	7.60	4.63	12.23
Total	**123.80**	**223.18**	**346.38**

Derelict land by location (all sites)

Ashby Woulds	171.12
Ellistown/Bagworth	59.45
Swadlincote	110.87
Other	141.56
Total	**483.00**